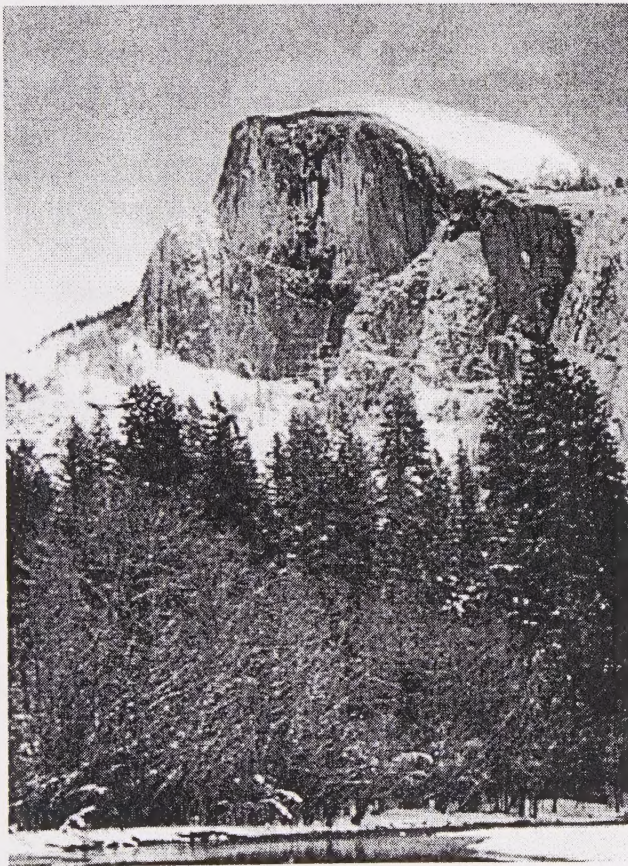


Yosemite Area Regional Transportation Strategy Major Investment Study

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SHORT AND LONG RANGE PLAN



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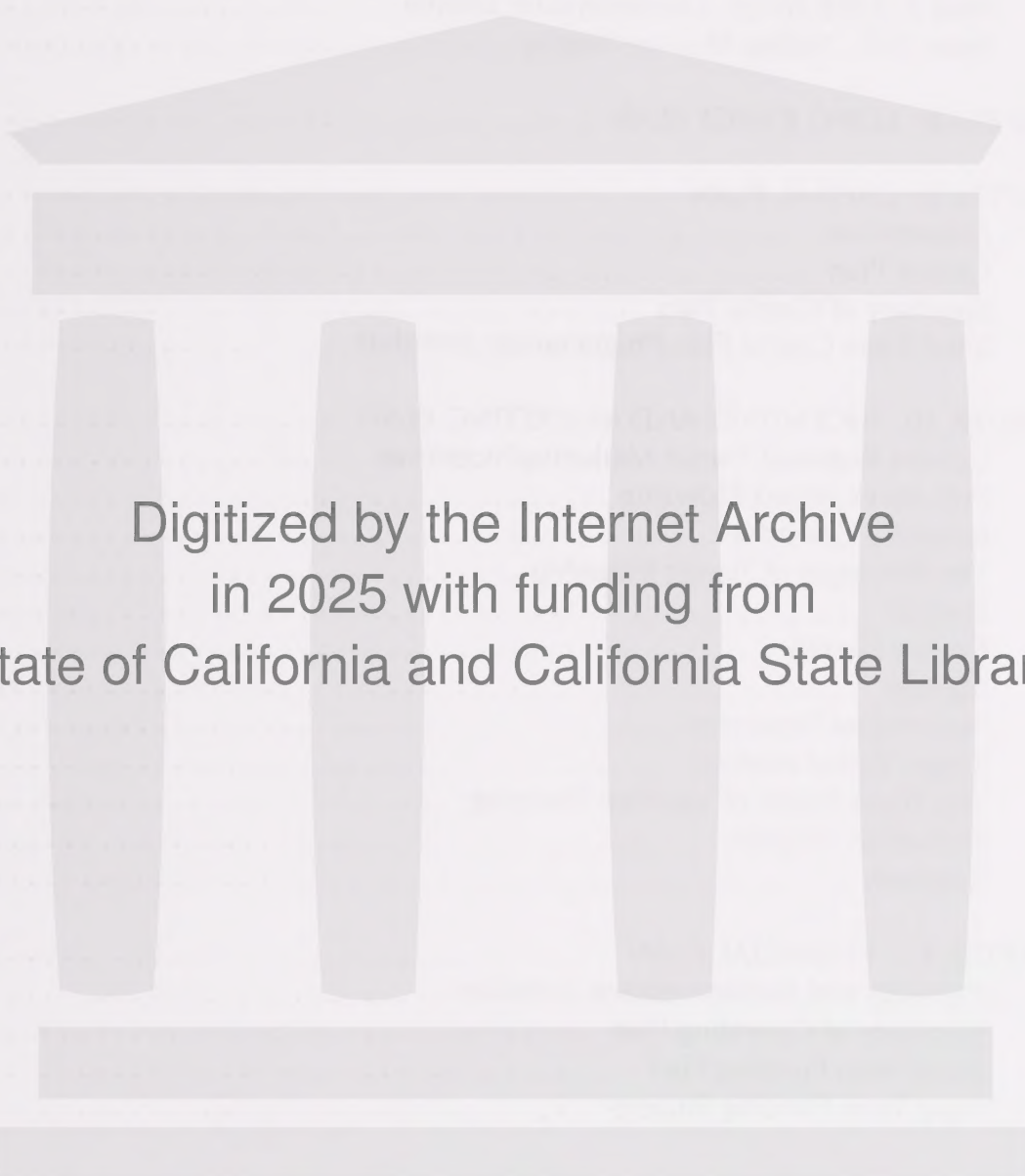
Working papers are accepted as concept documents and do not represent the policy of the YARTS Board, the National Park Service or local governments.

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EXECUTIVE SUMMARY

Traffic congestion leading into Yosemite National Park via its four primary gateways has become an increasing concern to those who care about the unique resources of the Park, as well as the economic well-being of the gateway communities. As visitation has increased, congestion on peak weekends can result in long delays at Park access gates, and has occasionally resulted in temporary Park closures as the demand to visit Yosemite Valley exceeds its capacity to accommodate visitor vehicles.

The need to develop an alternative to private vehicle access was underscored after the winter of 1996-97 in which severe weather caused major flood damage to Yosemite Valley. Following the floods, the Park was awarded a Congressional appropriation to mitigate flood damage and to implement the policies of its 20-year-old General Management Plan (GMP). Implementing the GMP would reduce the number of visitors entering the Valley during much of the peak season, by reducing the amount of available parking and automobile infrastructure.

**YARTS seeks to implement
a regional transit
alternative which will
complement continued
auto access to Yosemite
National Park and
maintain a quality of
experience for its diverse
visitors.**

To maintain accessibility to this national treasure and to avoid the economic impacts of a reduction in tourism to this region, the Yosemite Area Regional Transportation Strategy (YARTS) seeks to provide an alternative means of access that will ensure a high quality experience for visitors, while limiting the impact of the automobile on the Park. This Short and Long Range Transit Plan provides a blue print for implementing a Phased Transit Alternative, selected by the YARTS Management Board as its preferred alternative.

This Plan builds on the more than 15 working papers already prepared for this project, many of which are summarized in this document. Despite the large amount of work that has already been done, there are a number of critical steps remaining to transform YARTS from a rather loosely organized planning task force to an implementation and operating agency. These steps are highlighted in Figure ES-1, which follows. Major remaining tasks include environmental documentation, policy implementation, and developing service standards for YARTS initial service.

The following paragraphs summarize the material presented in this report. The reader is also directed to the working papers, listed in Chapter 1, which provide more detailed information on many of the topics presented in this report.

MONTH	2000									
	July	August	February	March	April	May	June	July	August	September
Organization	<div>Staff/Board Powers Authority</div>									
Construction/ Phase 0 Parking and Infrastructure	<div> <div>Staff: Identify bus stops and parking sites</div> <div>Board: Approve bus stops, if any</div> <div>jurisdictions: Approve bus stops, if any</div> </div>									
Policies	<div> <div> Key Policy Commitments National Park Service <ul style="list-style-type: none"> Implement transit service definition Define employee transportation policy for summer, 1999 Commit to entrance fee elimination for riders Finalize other pricing policies for summer Finalize routing within Park for 1999 YARTS Board <ul style="list-style-type: none"> Define Service levels Set minimum standards </div> <div>NPS: Expand Park Employee Transportation Program</div> </div>									
Construction/ Phase 0 Service	<div> <div>Prepare Contracts</div> <div>Vendor: Operate Phase 0 Service Staff: <ul style="list-style-type: none"> Oversee Service Review vendor's reports prepare summaries for Board </div> </div>									
Marketing	<div> <div>Board/Staff: Produce brochures</div> <div>Staff/NPS/YCS: Train staff</div> <div>All: Promote</div> </div>									
Phase 1 Parking	<div>Local jurisdictions Amend general plans</div>									
Phase 1 Service	<div> <div>Board/Local jurisdictions: Select final</div> <div>Staff/NPS: Construction including signs, etc.</div> </div>									
Funding										

Chapter 1: Introduction

The Yosemite Area Regional Transportation Strategy group was founded over six years ago in response to increasing congestion in the five counties surrounding Yosemite National Park. At that time, the organization represented little more than a handshake, and a common understanding that a regional approach was the only reasonable way to address access issues to a national park with over four million annual visitors entering at four different primary Park entrance stations. More recently, the group signed a Memorandum of Understanding, clarifying their basic objectives:

- Improve transportation service within the Yosemite region
- Reduce dependence on the single family vehicle within the Yosemite region
- Reduce air quality impacts in the Yosemite region
- Improve economic viability compatible with the character of the Yosemite region

As a significant step towards meeting these goals, this Major Investment Study develops and evaluates a series of alternatives for providing regional transit to the Yosemite access corridors. This study complements other work being done by the National Park Service as a result of their Valley Implementation Plan, but is focused on the needs of the local region.

Chapter 2: The YARTS Planning Process

The YARTS planning process began over six years ago with the formation of the YARTS Task Force. The task force, formalized with a Memorandum of Understanding, has already contributed to the region through many accomplishments, highlighted in Figure ES-2. These accomplishments were possible only through the cooperation and dedication to common goals that has existed between the five gateway counties, the National Park Service and other agencies. This cooperative model has served as an example to other organizations interested in solving complex regional problems.

This phase of the YARTS planning process followed the rigorous Major Investment Study requirements, allowing for a high level of analysis that considers a variety of alternatives. The process included extensive input from stakeholders throughout the region as well as an extensive public input process. The resulting alternative and implementation plan reflect very closely the comments received through those venues.

While much has been done to move YARTS towards implementation, much remains to be done. The general roles and responsibilities of YARTS, its member jurisdictions and other related stakeholders are shown in Figure ES-3.

FIGURE ES-2 YARTS ACCOMPLISHMENTS

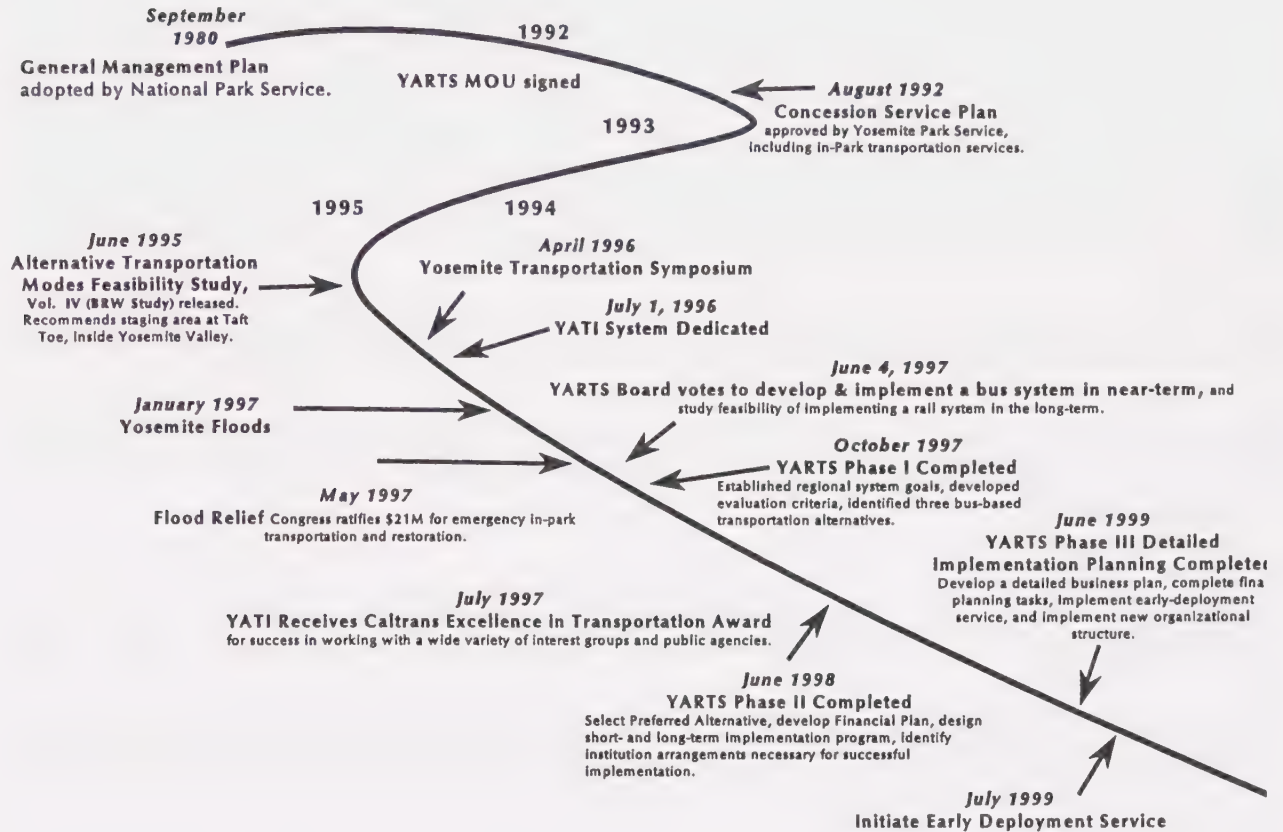


FIGURE ES-3
YARTS ROLES AND RESPONSIBILITIES

Responsibility	Staff/Consultants	YARTS Board	Local Jurisdictions	National Park	Private Operators	Others
Refine service levels in each corridor	✓	✗			✓	
Define capital needs (<i>buses & facilities</i>)	✗	✗				
Develop RFPs for vendors	✓	✓				
Respond to RFPs and provide service					✗	
Market services	✗	✗	✓	✓	✓	Local Business Local Chambers Lodging Providers
Refine stops in local areas		✓	✗		✓	
Refine route/stops in National Park		✓		✗	✓	
Define Park pricing for transit riders (NPS & YCS)				✗		
Identify other incentives		✓	✗	✗	✓	Local Business
Manage/monitor service quality	✗	✗			✓	Riders
Determine Park auto access policy		✓	✓	✗		
Develop employee incentives (NPS & YCS)				✗		
Develop JPA agreement	✓	✗	✗			
Provide on-going funding/support	✓	✓	✓	✓		Funding Agencies Private Sources

✗ Lead Responsibility
✓ Support Role

Chapter 3: Alternatives Considered

The YARTS Major Investment Study developed three action alternatives and a No Project option building on the findings of previous study phases. All action alternatives were designed to be technically feasible, although not all alternatives were equally desirable based on the evaluation criteria discussed in Chapter 4. Later chapters focus on the implementation of the Phased Transit Alternative which was designated the locally preferred alternative. Each of the alternatives are summarized below, and on Figure ES-4.

No Project Alternative

This alternative assumes that the YARTS Board disbands and stops pursuing a regional transit solution for each of the four gateway corridors. It also assumes that the Park Service continues its efforts to implement the access restrictions outlined in its Valley Implementation Plan, including the construction of a parking lot at Taft Toe.

As parking restrictions are enacted in the Valley, private “transit” services may naturally develop, but these will be designed solely by market forces, without regard to the needs of local jurisdictions. The result is a potentially devastating effect on the local economies, and a failure to meet the other YARTS and NPS objectives.

Alternative 1: Traffic Management Plan

This alternative is designed to serve only “overflow” visitors requiring access to the Valley after vehicle capacity has been reached. If day visitor parking is still available in the Valley, there is no YARTS service other than existing connections to intermodal centers. Once vehicle capacity is reached, changeable message signs direct motorists to intercept parking lots in the corridors, and YARTS buses begin shuttling passengers to the Valley.

FIGURE ES-4
COMPARISON OF YARTS ACTION ALTERNATIVES

	Alternative 1 Traffic Management	Alternative 2 – Phased Transit Service				Alternative 3 Maximum Transit Access
		Phase 0 Pre- Implementation	Phase 1 Initial Staging	Phase 2 Valley Parking Restriction	Phase 3 Further Parking Restriction	
Parking Required	3,200	0	740	4,150	6,000	10,000
Operating Cost (maximum)	\$3.4M	\$0.8M	\$1.5M	\$6.9M	\$13.7M	\$73.73M
Annual Passengers (maximum)	487,000	74,400	121,700	838,700	1,421,500	4,608,000
Maximum Bus Trips to Valley/Hour	18	4	8	14	48	48
Cost/Passenger ¹	\$13.43	\$12.23	\$13.72	\$14.04	\$15.30	\$16.00
Buses Required	73	17	33	125	217	390

¹Based on maximum ridership and maximum cost estimate. Detailed description includes a range.

Alternative 2: Phased Transit Alternative

Two primary factors guide the Phased Alternative: It is a voluntary system, and it starts small and then grows based on the proven success of its first phases. As a voluntary system it is based on providing incentives to encourage transit ridership, including buses with ample inside and under-vehicle storage, reclining seats, reading lights and interpretive media.

At first, service is focused on existing lodging locations, then it is expanded to serve existing or easily developed parking locations. Only in later phases are large, complex staging areas developed. Ultimately, about 6,000 parking spaces will be required in the region to accommodate the anticipated growth in visitation. However, the phased nature of this alternative allows some service to begin as early as 1999 with minimal investment in infrastructure and with minimal subsidy to the operation.

The service begins with an early deployment or demonstration phase, implemented in 1999. The initial investment in intercept parking locations will not be on-line for several additional years, keeping the system very modest in its earliest stages. Even in its early stages, transit riders will be guaranteed access into the Valley, including all major attraction areas, and will receive price incentives and other inducements to try transit.

Alternative 3: Maximum Transit Access

This alternative assumes most day visitors will arrive by transit, and only visitors with overnight reservations or special permits would be allowed to drive into the Valley. It would require about 10,000 parking spaces to be developed throughout the region. Unlike the other alternatives, which only meet seasonal peaks in demand, Alternative 3 provides service year-round. The alternative provides the greatest amount of local mobility, since a year-round system could provide for inter-community travel and even for short trips within a single community. However, there is significant risk in investing in such a major system all at one time, in advance of confirmation of the market for such a complete service.

Chapter 4: Evaluation Process

The evaluation of alternatives is a critical component of a Major Investment Study. The alternatives were all evaluated based on a consistent set of criteria developed with the Management Board and their advisory committees and they reflect substantial public input.

Quantitative and qualitative evaluations on a variety of key indicators were performed. The alternatives were then "scored" using a scale of 1-5 to compare the qualities of each alternative. The results of that evaluation are shown on Figure ES-5. While each of the alternatives had both advantages and constraints, the Phased Transit Alternative has been selected as the Locally Preferred Option and is fully developed throughout the remainder of the report.

FIGURE ES-5
SUMMARY EVALUATION OF ALTERNATIVES
Relative rankings 1-5; 5 = highest ranking, 1 = lowest ranking

Criterion	No Project	Alternative 1 Traffic Management	Alternative 2 Phased Transit	Alternative 3 Maximum Transit
SERVICE EFFECTIVENESS				
Ridership	1	3	4	5
Day Vehicles Removed	2	3	4	5
Visitation Increase	1	4	4	3
Visitor Spending	1	3	5	3
Market Capture	1	2	4	5
SERVICE EFFECTIVENESS SUBTOTAL	6	15	21	21
SERVICE EFFICIENCY				
Cost per Rider	2	5	4	3
Boardings Per Service Hour	1	5	4	3
Subsidy Required	5	3	4	2
Cost per Vehicle Removed	5	3	3	2
Intermodal Connections	1	1	3	5
Serves Multiple Goals	1	2	3	5
SERVICE EFFICIENCY SUBTOTAL	15	19	21	20
ENVIRONMENTAL PRESERVATION				
Restoration Potential	4	5	4	3
Air Quality	4	4	3	4
ENVIRONMENTAL PRESERVATION SUBTOTAL	8	9	7	7

FIGURE ES-5
SUMMARY EVALUATION OF ALTERNATIVES
Relative rankings 1-5; 5 = highest ranking, 1 = lowest ranking
(Continued)

Criterion	No Project	Alternative 1 Traffic Management	Alternative 2 Phased Transit	Alternative 3 Maximum Transit
QUALITY OF SERVICE				
Visitor Experience	3	4	5	2
Risk	1	3	5	1
Frequency	1	4	3	5
Reliability	2	3	4	3
QUALITY SUBTOTAL	7	14	17	11
OVERALL SCORE	36/85 = 42%	57/85 = 67%	66/85 = 78%	59/85 = 69%

Chapter 5: The Locally Preferred Alternative

The Phased Transit Alternative has been selected as the Locally Preferred Alternative. It offers a reduction in risk over the other alternatives, as the market for transit is allowed to develop over time. An initial demonstration service would be implemented in 1999, with a second year of refined demonstration (Phase 0) occurring in 2000. Those initial phases are intended to be implemented without significant investment in parking or vehicle infrastructure, through the permitting of private operators to act as YARTS transit providers. Ridership would be encouraged through pricing policy, employee transportation policies, marketing, and the quality of the transit experience.

The Phased Transit Alternative recognizes that travel behavior will change slowly and seeks to minimize risk while maximizing access to the National Park.

As ridership increases, intercept parking facilities will be required on each of the four primary access corridors. The amount of parking required begins small and increases with increasing demand or changes in Park policy.

The Phased Alternative is designed to focus on peak visitation seasons. Initially, service will be provided only during summer months, with expansion on some corridors possible through shoulder seasons. The alternative is designed to encourage maximum participation from private sector operators who will receive incentives to operate as "transit" carriers and who will be responsible for building and refining the YARTS service.

The phases described in this chapter provide "snap shots" in the evolution of the alternative, and are provided for illustrative purposes only. It is possible that some phases may never be reached, or that intermediate steps may be taken as the system grows.

Chapter 6: Policies Critical to YARTS' Success

Policy actions are required by the National Park Service, the YARTS Board, and local jurisdictions to ensure the success of YARTS service. For YARTS to function effectively, the National Park Service must adopt the following policies in support of YARTS:

- YARTS passengers must be guaranteed access into the Park.
- YARTS passengers should be able to travel on YARTS buses to the center of activity or "primary node" in the Valley without requiring a transfer.

- The transfer between YARTS and other Park shuttle services should be as seamless as possible.
- Transit vehicles should be given highest priority inside the Park, and at entrance stations.
- Staging areas should become an extension of the "Yosemite experience."
- YARTS information should be available throughout the Park.
- Pricing policies must be established favoring transit.
- Employee transportation demand management programs must be developed to encourage YARTS ridership among Park and concessionaire employees.
- The YARTS initiated definition of transit service should be implemented as soon as possible, and transit providers should be exempted from the \$300 per day entrance fee charged tour buses. Additional incentives to operate in transit mode should also be provided.

The National Park Service, YARTS Board and local jurisdictions all have a policy role in determining the viability of YARTS service.

The YARTS Board and local communities also must make policy decisions to support YARTS. Their decisions include:

- Work with the National Park Service and private transit operators to implement the definition of transit services which include providing a scheduled service, accepting walk-on passengers and operating in a "stop, drop and go" mode throughout the Park.
- Local jurisdictions must make general plan amendments in support of YARTS, prior to the completion of the environmental review of the Plan.
- Local jurisdictions will retain local land use control and must implement the YARTS guidelines to locate adequate parking as close to the Valley as possible.
- The YARTS Board, working with local jurisdictions must develop service standards which can be the basis for negotiation with private operators.
- The YARTS organization must be formalized through a Joint Powers Agreement, drafted by YARTS and approved by all member jurisdictions.

In addition, YARTS, its member agencies and all other stakeholders must work together to improve education about the value of YARTS service and to market the system to attract riders.

Chapter 7: YARTS Short Range Action Plan

This action plan lays out specific implementation steps required during the first five years to implement the YARTS system. Tasks in the initial years are laid out very specifically, as more is known about the progress of the system. Later years are less precise, as the level of service provided in future years will be determined based on the success of previous years.

The following summarizes the activities described in the Action Plan chapter:

Year 1 (1998-1999): Preparations

A large amount of work must be completed to prepare YARTS for its first summer of service. The most critical work is securing key policy commitments from both the National Park Service and the gateway communities.

Approve key policy matters - Key policy issues are outlined in Chapter 6. The policies most critical to the success of the initial YARTS system must be implemented by the National Park Service. They include employee transportation policies, entrance pricing and other access restrictions that might be implemented by the Park. These policy decisions should be made prior to issuing RFPs for service in 1999, as they will impact the viability of the service and the interest of private operators who must absorb significant risk in responding to the RFP.

Form Joint Powers Authority - Formalizing the YARTS organization and re-invigorating regional support for YARTS goals is a critical and immediate work element. The first three months of the coming fiscal year will include negotiating a draft agreement, to be approved by all member agencies. The JPA should be in effect prior to service start-up in June, 1999, to allow operators to indemnify the YARTS organization and member jurisdictions.

Perform environmental analysis - While a locally preferred alternative has been selected, it can not be implemented prior to the completion of extensive environmental analysis. This work element is expected to take nearly 8 months, and to commence at the beginning of the fiscal year.

Finalize Demonstration Program - Another early work element requires the YARTS Board to develop minimum service criteria for the first year of YARTS service. These standards will be reviewed with private operators who will prepare independent proposals for providing transit service in each of the gateway corridors. The demonstration program can be finalized only after bids are received and vendors for the summer service are selected.

Implement Park employee transportation program and pricing programs - Simultaneous with the implementation of YARTS service, the Park must implement its policies for

employee transportation demand management. It is expected that these policies will include substantial incentives for riding YARTS, including subsidizing employee fares on-board the system.

Develop and implement marketing program - A marketing and education program is critical to the success of the initial YARTS service. A brochure will be developed to market the system identity and services offered. Information outlets including YATI upgrades will be explored. Information will also be made available throughout the Park, in the gateway communities, and through many outlets where potential visitors receive trip planning information.

Prepare to develop staging areas - While intercept parking or staging areas are not anticipated during the first two years of service, the lead time for implementation require that local jurisdictions begin making the decisions required to implement these facilities as soon as practical. This includes reviewing General Plan documents for land use plan consistency, implementing the guidelines provided by YARTS to the local jurisdictions and beginning to site and evaluate alternative locations.

Year 2 (1999-2000): Demonstration Service and Evaluation

The second year of the Action Plan relies on the evaluation of the demonstration service to further refine the requirements for Year 2000 service levels. Intercept parking locations begin to be implemented in response to Phase 1 requirements, although service levels are not increased at this time.

Manage Demonstration Service - The most critical task in this year is "starting the system off right." Managing the quality of the demonstration service will be a key task, involving a variety of parties.

Evaluate Demonstration Service - The demonstration service provides a laboratory for refining future year services. The evaluation of the demonstration must be completed in time to prepare for the Year 2000 service.

Prepare for Year 2000 service - Following the assessment of the demonstration service and the completion of the year-round database, the Year 2000 (Phase 0) service levels can be refined. This will require input from a variety of stakeholders, including the private operators that provide the demonstration service.

Begin implementation of intercept parking - Activities for implementing intercept parking will continue in local jurisdictions. A key location is the parking recommended inside or very close to the National Park, in the 120 Junction or general area of Crane Flat. Locating a site in that location is very important for service improvements on the 120 corridors and for accommodating visitors who may want to enter from one gate and exit from another.

Years 3-4: Initiate Day-Use Staging

The work program in subsequent years will be adjusted depending on how fast YARTS grows. Key tasks in these years includes securing on-going funding, completing the staging areas required for system growth and evaluating the need for publicly owned vehicles.

Chapter 8: Long Range Plan

At this point, it is impossible to predict precisely when YARTS will move to phases 2 or 3. In developing a Long Range Plan, it is more appropriate to describe triggers that will require expansion of YARTS, as well as critical issues that YARTS will likely face. As service expands, the YARTS Management Board will be faced with several important questions:

- To what extent should service levels be equal in each of the corridors?
- What is the role of cities such as Fresno, Merced, Oakdale, Lee Vining and Mammoth Lakes?
- What is the role of Fresno and Stanislaus counties?
- How will the Park Service determine whether YARTS' "success" will allow them to implement all or some of the changes described in the GMP?
- At what point will YARTS transition from vendor-owned to YARTS-owned vehicles?
- Who will construct and operate alternative fueling centers? How will YARTS transition to cleaner-fueled vehicles?

This chapter frames each of these questions and provides resources that can be used to begin to address them. Developing policies that respond to each of these questions will be the focus of longer term planning efforts. In the longer term, other modes, including rail service, may need to be considered.

Chapter 9: Capital Plan

The four phases of the recommended alternative require dramatically different levels of investment in capital facilities. It is unlikely that all four corridors will proceed through the service phases at the same rate. Ridership will likely develop at different speeds in different corridors, and some corridors may be ready to move into a new phase before the others. Figure ES-6 summarizes the capital costs associated with each phase.

FIGURE ES-6 CAPITAL COSTS (PHASES 0-3)

	BUSES		PARKING			OTHER CAPITAL IMPROVEMENTS		
	# of buses to purchase	Total Cost (1)	Parking Location (7)	# of new spaces (7)	Total Cost	Capital Improvements Outside YNP	Total Cost	Total Capital Cost
PHASE 0	-	\$ -	Highway 120 Corridor (East and West) (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Groveland: 9 sites)(120 E: 3 campground sites)	\$32,400	
			Highway 41 Corridor (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Oakhurst: 26 sites)	\$70,200	
			Highway 140 Corridor (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Mariposa: 31 sites)	\$83,700	
			Total Parking Costs for Phase 0	-	\$0	Total "Other Capital Items" Phase 0	\$186,300	\$186,300
PHASE 1	-	\$ -	Highway 120 Corridor (East and West) (2) (Develop new staging facility inside YNP near the 120 Junction)	400	\$1,200,000	Signs/Shelters/Benches (5) (6) (Amenities for new intercept site)	\$5,400	
			Highway 41 Corridor (3) (Develop staging facilities at existing parking/lodging sites)	200	\$1,000,000	Signs/Shelters/Benches (6) (Upgrading amenities at all 26 existing sites)	\$70,200	
			Highway 140 Corridor (3) (Develop staging facilities at existing parking/lodging sites)	140	\$700,000	Signs/Shelters/Benches (6) (Upgrading amenities at all 31 existing sites)	\$83,700	
			Total Parking Costs for Phase 1	740	\$2,900,000	Total "Other Capital Items" Phase 1	\$159,300	\$3,059,300

FIGURE ES-6 CAPITAL COSTS (PHASES 0-3) (CONTINUED)

	BUSES		PARKING				OTHER CAPITAL IMPROVEMENTS	
	# of buses to purchase	Total Cost (1)	Parking Location (7)	# of new spaces (7)	Total Cost	Capital Improvements Outside YNP	Total Cost	Total Capital Cost
PHASE 2	125	\$ 51,250,000	Highway 120 Corridor (East and West) (2) (Expand existing facility inside YNP)	1,657	\$4,971,000	Signs/Shelters/Benches (5) (Upgrading amenities at existing intercept site)	\$22,400	
			Highway 41 Corridor (3) (Develop new intercept parking facilities along the corridor)	920	\$4,600,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$12,500	
			Highway 140 Corridor (3) (Develop new intercept parking facilities along the corridor)	830	\$4,150,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$11,300	
			Total Parking Costs for Phase 2	3,407	\$13,721,000	Total "Other Capital Items" Phase 2	\$46,200	\$65,017,200
PHASE 3	92	\$ 37,720,000	Highway 120 Corridor (East and West) (3) (Develop new intercept parking facilities along the corridor)	910	\$4,550,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$12,300	
			Highway 41 Corridor (3) (Develop new intercept parking facilities along the corridor)	496	\$2,480,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$6,700	
			Highway 140 Corridor (3) (Develop new intercept parking facilities along the corridor)	430	\$2,150,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$5,900	
			Total Parking Costs for Phase 3	1,836	\$9,180,000	Total "Other Capital Items" Phase 3	\$24,900	\$46,924,900
TOTAL	217	\$ 88,970,000	Total Parking Costs for All Phases	5,983	\$25,801,000	Total "Other Capital Items" for all Phases		\$115,187,700

It is important to note that significant capital expenditures must be made two years before the new facilities are actually put into use. A bus procurement cycle, for example, typically takes two years. Figure ES-7 shows a sample programming schedule, with expenditures for Phase 1 parking beginning immediately even though the parking will not be needed for at least two years.

FIGURE ES-7
CAPITAL COSTS BY YEAR

Category	FY 1998/99	FY 1999/00	FY 2000/01	FY 2001/02	FY 2002/03	FY 2003/04
Parking Facilities <i>Design</i> <i>Environmental</i> <i>Engineering</i>	\$1,139,000 (For Phase 1)	\$561,000 (For Phase 1)			\$1,644,000 (For Phase 2)	\$1,644,000 (For Phase 2)
Parking Facilities <i>Acquisition</i> <i>Mitigation</i> <i>Construction</i>		\$700,000 (For Phase 1)	\$1,100,000 (For Phase 1)	\$1,100,000 (For Phase 1)		
Other Capital <i>Signs</i> <i>Shelters</i> <i>Benches</i>	\$178,200 (For Phase 0)	\$159,300 (For Phase 1)				
TOTAL	\$1,317,200	\$1,420,300	\$1,100,000	\$1,100,000	\$1,644,000	\$1,644,000

Chapter 10: Incentives and Marketing Plan

For a new transit system such as YARTS, a marketing and education program is essential to the success of the system. While good marketing and incentives may encourage people to try transit for the first time, only a quality service can retain ridership.

A voluntary transit system to Yosemite must be at least as attractive as driving. Unlike driving, using transit requires passengers to learn something about schedules, bus stops, fares, etc., and may require flexibility in travel times and limits on luggage. To compete with the car, YARTS should implement the following incentives:

- YARTS passengers must be guaranteed access to the Park, and YARTS should use this as a key marketing message.
- YARTS rides should be pre-sold with travel packages, and travel packages should be encouraged.

- Tickets should be good for unlimited rides all day, all over the YARTS service area.
- Interpretive information should be available on the bus and at staging areas.
- Seamless service should be a critical component of the system design.
- Costs should be kept as low as possible, and always be cheaper than driving.
- Frequent service is needed to combat the freedom of the automobile.
- Service spans need to be broad enough to serve most travel days, including people who want to take advantage of bright summer evenings.
- Consistency and reliability are critical.
- Ample storage is needed on buses, and lockers are needed at bus terminals in the Valley.
- YARTS vehicles should provide a very comfortable ride.

YARTS should develop and market a variety of privileges that will be offered to YARTS passengers. Besides guaranteed access to the Valley, passengers could receive discounted or free bicycle rental, stroller rental and storage lockers, and discounts on food service or grocery purchases. Other “tie-ins” with gateway businesses should also be explored.

YARTS will also need to work quickly to develop clear logos, signage, bus stop signs and bus stop amenities. A variety of brochures including maps and schedules will also need to be developed. A single toll-free telephone information service should be established, along with significant upgrade to YATI. Finally, the YARTS bus ticket should be designed to be difficult to lose and worthwhile keeping as a souvenir. All of these materials should be aimed at YARTS’ target markets which include “ecotourists,” RV travelers, senior citizens, international independent visitors, air and rail passengers, Yosemite Valley employees and local area lodgers and campers.

Chapter 11: Financial Plan

The Financial plan identifies costs and funding to pay for all planning and implementation activities for each phase of the recommended alternative. The costs include not only operating and maintenance, but also administrative and marketing expenses. Figure ES-8 summarizes the Short-Term Funding Plan.

FIGURE ES-8
SHORT-TERM FUNDING PLAN

	1998/99	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
COSTS						
<i>Capital Costs</i>						
Parking Facilities (1)						
Pre Eng./Design/Environmental	\$1,139,000	\$561,000			\$1,644,000	\$1,644,000
Construction		\$700,000	\$1,100,000	\$1,100,000		
Other Capital Improvements	\$186,300	\$159,300				
Subtotal Capital Cost	\$1,325,300	\$1,420,300	\$1,100,000	\$1,100,000	\$1,644,000	\$1,644,000
<i>Operating Costs</i>						
Phase		Phase 0	Phase 0	Phase 1	Phase 1	Phase 1
O & M Costs (2)		\$682,000	\$682,000	\$1,540,550	\$1,540,550	\$1,540,550
Administration/Marketing	\$450,000	\$450,000	\$450,000	\$500,000	\$500,000	\$500,000
Subtotal Operating Cost	\$450,000	\$1,132,000	\$1,132,000	\$2,040,550	\$2,040,550	\$2,040,550
Total System Cost	\$1,775,300	\$2,552,300	\$2,232,000	\$3,140,550	\$3,684,550	\$3,684,550
REVENUES						
IIP Funds (1998 STIP)	\$1,325,300	\$1,400,000				
IIP Funds (2000 STIP)			\$1,100,000	\$1,100,000		
IIP Funds (2002 STIP)					\$411,000	\$411,000
Livable Communities Initiative (3)					\$822,000	\$822,000
Private Contributions (4)					\$411,000	\$411,000
FTA Section 3 Discretionary Grant (5)	\$200,000	\$300,000	\$200,000	\$250,000	\$150,000	\$150,000
Caltrans Research/Planning Grant (6)	\$200,000		\$75,000	\$120,550	\$200,000	\$200,000
YATI Grant (7)	\$50,000					
Passenger Fares (High Estimate)		\$780,000	\$780,000	\$1,670,000	\$1,670,000	\$1,670,000
National Park TDM Grant (8)		\$72,300	\$77,000			
Local/ Other Funding Contributions (9)					\$20,550	\$20,550
Total System Revenues	\$1,775,300	\$2,552,300	\$2,232,000	\$3,140,550	\$3,684,550	\$3,684,550

- (1) All parking facility costs for FYs 1999 through 2002 for Phases 0 and 1. For Phase 2, preliminary engineering/design and environmental are included in FYs 03 and 04.
- (2) Assumes no operating costs in FY 1998/99.
- (3) Assumes federal funds made available through the Livable Communities Initiative to pay for parking facilities
- (4) Assumes private sector funds are available for parking facilities.
- (5) \$500,000 in existing FTA Grant drawdown in two years. Assumes MCAG is successful in securing future FTA Discretionary Grants.
- (6) \$200,000 in existing Caltrans Grant for FY 1998/99. Assumes MCAG is successful in securing future Caltrans Discretionary Grants.
- (7) Assumes \$50,000 of the \$275,000 YATI grant will be used for marketing YARTS.
- (8) Assumes that \$150,000 would be available over a 2 year period to pay for Park employees YARTS passes.
- (9) These contributions could come from Park Service, private sources or other. Fund sources would be determined by individual counties.

Through MCAG's success in securing state and federal discretionary grants, YARTS is reasonably assured that it can pay for its capital requirements and administrative costs over the next six years. Once YARTS begins constructing significant staging areas, however, both its capital and operating expenses increase greatly. Given the lead time required for many funding sources, YARTS should begin to explore long-term funding as soon as possible. Additional long-term funding sources may include parking user fees in the Valley, concessioner fees, National Park Service appropriations, the Federal Lands Highway Program, and Department of Transportation Funds for the National Park Service.

Chapter 12: Organizational Plan

YARTS' Memorandum of Understanding has worked well during the early years of organizational development, but it is now time to formalize the organization. The Joint Powers Authority (JPA) is the most appropriate organizational model for YARTS because it can sign contracts, hire staff, acquire property, incur debts and receive grant funds. Unlike Special Districts, JPAs cannot propose tax measures or levy taxes directly. Moreover, JPAs are very simple to form by mutual agreement and do not require State legislation.

YARTS must have a JPA agreement in effect before service begins in June of 1999. To do so, the Management Board must move forward on the following steps:

- Develop a draft Joint Powers Authority agreement within the next six months and ratify it within nine months.
- Consider the creation of a special district in the future.
- Appoint an ad-hoc committee to oversee the institutional transition.
- Appoint a facilitator to oversee the JPA formation committee.

In addition, the chapter offers the following recommendations:

- Limit YARTS' focus to transportation.
- Add implementation to YARTS' policy-making role.
- Increase communication with Federal, State and local agencies.
- Initially maintain existing Board composition with provisions for additions in the future.
- Allow for broader representation on the advisory committees.
- Require a quorum to be four voting members.
- Require decisions to be made by a majority vote of full voting membership.
- Establish a policy addressing potential conflicts of interest.
- Consider dividing the TCAC into two standing committees.

- Ensure the independence of the advisory committee(s).
- Designate a chairperson and reporter in each committee.
- Establish a direct reporting mechanism between the Board and its committees.
- Provide for the creation of other standing or temporary committees.
- Manage the dialog between the public and the Board at meetings.
- Continue to contract with MCAG to provide transitional staffing.
- Develop an organizational structure within the next 12 months.
- Identify appropriate staff members based on new skill set.
- Allow YARTS activity level to dictate the size of staff.
- Provide legal assistance routinely and include it at all YARTS meetings.

CHAPTER 1: INTRODUCTION

The Yosemite Area Regional Transportation Strategy group was founded over six years ago in response to increasing congestion in the area surrounding Yosemite National Park. The group included the five counties surrounding the park, as well as the National Park Service and the Forest Service, whose lands are adjacent to the park, and Caltrans, the State Transportation Agency. Ultimately, the group was expanded to include other ex-officio members, including the State Department of Tourism and the Federal Highway Administration.

At the time of its founding, the organization represented little more than a handshake, and a common understanding that a regional approach was the only way to address access issues to a National Park with over 4 million annual visitors entering from four primary gates. More recently, the group signed a Memorandum of Understanding, clarifying their four basic objectives:

- Improve transportation service within the Yosemite region;
- Reduce dependence upon the single family vehicle within the Yosemite region;
- Reduce air quality impacts in the Yosemite region; and
- Improve economic viability compatible with the character of the Yosemite region.

With state and federal interest in the region, the organization has been able to attract grant funds, culminating in this Major Investment Study (MIS). The MIS was designed to be completed in three parts:

- **Phase 1** – a feasibility study, evaluated all of the options for alternative modes, and concluded that a regional bus transit system offered the greatest opportunity for accommodating visitors in the short term.
- **Phase 2** – an alternatives analysis, which is summarized in this report, defined and evaluated a variety of alternatives and concluded that a Phased Transit approach would be the preferred alternative in the region, with an early deployment service to begin in summer 1999. The study also concluded that the YARTS organization should be formalized by creating a Joint Powers Authority within the coming fiscal year and prior to implementing service.

The YARTS members have long recognized that a cooperative regional approach is the key to solving Yosemite access issues.

- **Phase 3** – an implementation study, which will give YARTS the ability to implement service in 1999. The implementation phase will include the formalizing of the YARTS JPA agreement, as well as the management and monitoring of the early deployment or demonstration service. The results of the 1999 service will be used to refine service needs for the following year.

The Phase 2 study was conducted from July 1, 1997 through June 30, 1998, and covered a wide range of topics. Over 15 Working Papers, each focusing on a specific policy issue to be discussed by the YARTS Management Board, were completed and have been accepted by that Board. YARTS Management chose to “accept” rather than “adopt” working papers to show that while the documents met all contractual requirements and while the Board generally concurred with the recommendations in the working paper, the Board reserved its right to refine policies and make changes as the study progressed.

This Short and Long Range Transit Plan is designed to summarize the information that has been developed previously, creating a comprehensive record of the activity of this phase. The plan includes substantial new information, particularly in the Short Range Action Plan and Long Range Plan sections, which document the decisions yet to be made to implement the system, and provide a comprehensive work program for the coming year. The plan also includes detailed capital, financial and marketing plan information not previously presented.

WORKING PAPERS

Much of the information in this document is discussed in greater detail in the Working Papers that have already been reviewed. For additional information on the topics included in this Short and Long Range Plan, the reader is referred to the following documents:

Working Paper #1	Review of Local Planning Efforts
Working Paper #2	Data Collection Methodology
Working Paper #3	Supportive Policies
Working Paper #4	Funding Opportunities
Working Paper #5	Cost and Phasing Issues
Working Paper #6	Stakeholder Interviews
Working Paper #7	Intercept Parking Design Guidelines and Inventory
Working Paper #8	Employee Transportation Demand Management
Working Paper #9	Demonstration Project Potential
Working Paper #10	Economic Background Information
Working Paper #11	Incentives Promoting YARTS
Working Paper #12	Refined Options
Working Paper #13	Winter Data Collection
Working Paper #14	Public Workshop Summary
Working Paper #15	Evaluation of Alternatives

Working Paper #16 Initial Environmental Studies¹
Working Paper #17 Economic Opportunities¹

In addition to these working papers, a detailed Organizational Assessment was completed, and is published under a separate cover. All of these documents are available through the Merced County Association of Governments (MCAG) offices or via the Internet, at the www.yosemite.com website.

Combined with the information presented in this Short and Long Range Plan, this phase of analysis has been designed to meet all of the requirements of a Major Investment Study.

RELATIONSHIP TO OTHER PLANNING EFFORTS

The Yosemite region generates considerable interest from a number of diverse constituencies, including environmental and conservation organizations, visitors from around the world, the international media and all levels of government. Following the floods of the winter of 1996-97, the National Park Service received a \$190 million Congressional Appropriation to complete flood repair projects and to implement the nearly 20 year old General Management Plan (GMP) for Yosemite. As a step towards GMP implementation, the park issued the Valley Implementation Plan (VIP), a federal environmental document focusing on the land use changes that would be implemented in the Valley, and the access changes that would be required to support the land use plan.

Regional transit is mentioned in the VIP as the future primary access mode for day visitors to the Yosemite Valley. The Park Service has provided continuous support to YARTS by participating on its Management Board and Technical and Citizens Advisory Committee and also by coordinating its planning efforts through its consultant, BRW, with the consultants hired by YARTS. Together they have refined the access and circulation assumptions in the Valley Implementation Plan. Additional information will be released by the Park Service over the next several months reflecting that coordination.

The YARTS regional transportation strategy study and the Valley Implementation Plan sponsored by the National Park Service are two related but separate documents following related but separate processes for implementation. Support of the YARTS service does not

**Support of the
YARTS
recommendations
does not require
support of the
recommendations
in the Park
Service's Valley
Implementation
Plan, nor is the
VIP required for
the success of
YARTS.**

¹Not reviewed by Management Board

require support of the recommendations in the VIP, and while this Short and Long Range Plan is designed to allow the Park Service maximum flexibility in meeting its internal goals, VIP implementation is not assumed or required for the success of YARTS.

NEXT STEPS

This Short and Long Range Plan provides a blueprint for YARTS implementation. Care has been taken to define the activities of the next year in detail. Figure 1-1 summarizes the activities that need to take place during the coming year (July 1998 through July 1999) to implement service in the region and meet the goals of the organization.

FIGURE 1-1
YARTS DECISION MATRIX FOR SERVICE START-UP: SPRING 1998 - SPRING 1999

QUARTER	Consultant Deliverable	YARTS Staff Action	YARTS Board Decision	Local Government Decision	National Park Service Decision	Other
3rd Quarter 1998 Jul-Aug-Sep	Finalize marketing plan for demonstration service RFP for Initial Service Develop evaluation criteria Begin marketing program	Assist with marketing/outreach Prepare for YATI upgrades	Select Phase III consultant Finalize service specifications for 1999 service as input to the RFP Complete initial JPA agreement for circulation to local governments.	Identify any temporary parking that may be available for 1999 service demonstration. Local governments endorse YARTS plan	Finalize routing within park for initial service. Establish terminal facility for YARTS vehicles. Make policy decisions regarding pricing and employee subsidies for 1999 demonstration.	
4th Quarter 1998 Oct-Nov-Dec	Peer review of RFP Vendor conference and RFP distribution Vehicle RFP if funds are available (for future phases)	Identify potential service vendors Initiate YATI upgrades as needed	Finalize logo and other system identification	Approve joint powers or other organizational agreement	Begin marketing program at YNP.	
1st Quarter 1999 Jan-Feb-Mar	Prepare brochures for initial service	Vendor interviews	Vendor selection	Identify initial sites for intercept parking (if any)	Participate in vendor selection	
2nd Quarter 1999 Apr-May-Jun	Conduct training for National Park Service and concessionaire	Implement major media program for YARTS service				

CHAPTER 2: THE YARTS PLANNING PROCESS

OVERVIEW

Traffic congestion leading into Yosemite National Park and within Yosemite Valley has become an increasing concern to the many stakeholders who care about the unique resource of the Park, as well as the economic well being of the gateway communities that surround the Park. Congestion on peak summer weekends results in long delays at Park access gates, and has resulted in temporary Park closures as the demand to visit Yosemite Valley exceeds the capacity to accommodate visitor vehicles. While actual gate closures have been infrequent, press reports convey the message that access to the Park is not secure, which has the effect of “scaring away” potential tourists, who are the economic lifeblood of the region.

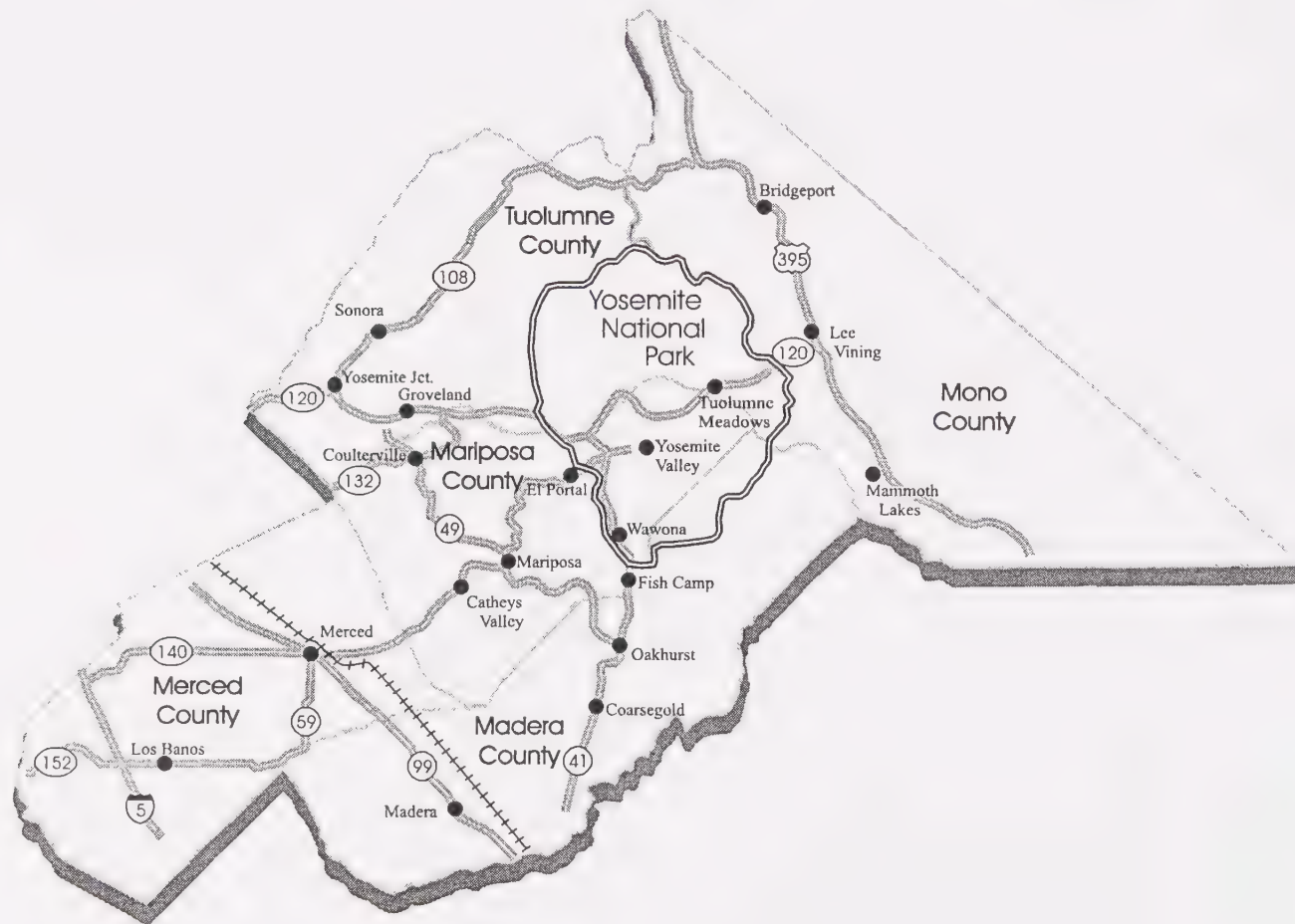
Prior to YARTS, the “capacity” of the Park was based on the theoretical number of vehicles that could be accommodated by the Park’s key attraction, Yosemite Valley. The YARTS study suggests that an alternative mode of access could provide for continued growth in visitation without increasing the number of vehicles within the Valley. By implementing a regional transit system, the Park would be better able to control access to the Valley without damaging the economies of the region.

The YARTS study suggests that an alternative mode of access could provide for increasing visitation without increasing the number of vehicles in Yosemite Valley.

Six years ago, the Yosemite Area Regional Transportation Strategy group (YARTS) was established to combat the problem of traffic congestion surrounding Yosemite National Park. Operating under a Memorandum of Understanding (MOU), YARTS membership has worked collaboratively to build a consensus and establish a regional solution. From its inception, the organization has remained committed to the goal of reducing congestion while preserving the natural beauty of the area and respecting the economic needs of the local communities. YARTS has been committed to actively involving its constituents, both in the region and beyond, in its planning process. With parties from around the world interested in its efforts, YARTS is in the position to create a vision for a transportation system that appropriately meets the needs of residents, business, Yosemite area guests, and the Park Service.

One of the keys to the success of the YARTS organization has been its regional perspective and emphasis on cooperation over competition. Figure 2-1 shows the geography of the Yosemite region and defines the local jurisdictions who have participated in the YARTS process.

FIGURE 2-1
YOSEMITE AREA REGIONAL TRANSPORTATION STRATEGY



All of the original signatories to the MOU, signed in 1992, remain active in the process today. They included the Counties of Mariposa, Merced, Madera, Mono and Tuolumne, the National Park Service and the California Department of Transportation (Caltrans) (*ex officio*). Later, the U.S. Forest Service and the Federal Highway Administration joined the effort as *ex officio* members. The spirit of YARTS mission as stated in the original MOU continues to guide its work: *"To pursue through a cooperative effort, improved transportation in the Yosemite Region."*

Under the Memorandum of Understanding, YARTS members identified four basic goals:

- Improve transportation service within the Yosemite region;
- Reduce dependence upon the single family vehicle within the Yosemite region;
- Reduce air quality impacts in the Yosemite region; and
- Improve economic viability compatible with the character of the Yosemite region.

Over time, YARTS objectives have included what can be seen as competing goals¹:

- Enhance the visitor experience and accommodate all visitors to the Yosemite region.
- Be affordable to all visitors to the Yosemite region.
- Improve accessibility in Yosemite Valley and to major Park destinations.
- Enhance tourism economies in the Yosemite gateway communities.
- Complement the objectives of Yosemite's General Management Plan.

¹"Yosemite Area Regional Transportation Strategy (YARTS): Establishing the Regional Solution to Transportation Problems in the Greater Yosemite Area." YARTS press packet.

By developing a regional consensus, YARTS has been increasingly effective in generating the funding required for the study and implementation of service. The "critical mass" created by the unity of the task force combined with the visibility of the National Park has resulted in funding for accelerated planning and will soon result in the ability to implement service that meets the long held objectives of the organization.

In advancing its vision of a regional transportation strategy, the organization can be credited with several accomplishments:

- Attracting national attention and interest to the region's effort to manage its transportation challenges.
- Designing and implementing a novel traveler information network known as YATI.
- Promoting a regional framework by advancing cooperation over competition.
- Establishing the interdependency between local activities and National Park policies.
- Achieving a greater level of trust and understanding among its participant agencies.
- Leading a preliminary planning process with limited outside support and resources.

Among YARTS' greatest accomplishments are the promotion of cooperation over competition and an improved relationship between the gateway communities and the National Park.

The organization can also be proud of the fact that it has accomplished these goals very efficiently. The YARTS task force has no direct staff, but rather contracts through the Merced County Association of Governments for staff on an "as needed" basis based on a Board approved budget. The designation of a lead agency has allowed YARTS to receive and disperse State and Federal grants through MCAG's existing infrastructure, without requiring a more formal organization.

THE YARTS PLANNING PROCESS

The YARTS planning process has been based on the belief that the objectives of all jurisdictions could be realized through communication and consensus building. This has extended to the organization's relationship with the public. An extensive public involvement process has been an integral element of the planning effort.

With the assistance of the MCAG staff and the availability of grant funds, concentrated activity began with increased intensity in the fall of 1996 when YARTS selected a consultant to study the regional feasibility of alternative mode access to Yosemite National Park. The study,

which was funded by a Congressional earmark, was completed in the Fall of 1997, and resulted in two key decisions:

- A bus transit service is a viable alternative for providing improved access to Yosemite National Park and the Yosemite region in the short term.
- A phased approach, which will allow service to be implemented incrementally, is the region's preferred approach.

In addition, the study concluded that rail service may also be viable in the long term, and recommended a rail feasibility study be conducted after completion of the bus implementation planning.

The second phase of planning, which is summarized in this Short and Long Range Plan, was designed to meet all of the requirements of a Major Investment Study (MIS). The study accelerated the YARTS planning process, bringing the organization to the implementation phase. Accomplishments in this second phase of planning include:

- Recommending specific policies to encourage the viability of a transit option to Yosemite, and coordinating closely with the Park Service to ensure that these recommendations are incorporated into Park planning.
- Developing a definition of what transit service is that distinguishes transit from tour bus service, and paves the way for sanctioning transit services as a part of YARTS development.
- Refining all potential project alternatives, including adding new information derived from technical studies and from the Park Service's Valley Implementation Plan planning process.
- Developing detailed evaluation criteria and completed an evaluation of alternatives consistent with the requirements of an MIS.
- Selecting a locally preferred alternative, the Phased Transit Alternative, which will begin service with a demonstration or early deployment project in 1999.
- Completing an initial environmental study for the first phase of implementation, leading to a program EIR to be completed in the next year.
- Developing an employee transportation demand management plan to assist the Park in encouraging alternative access modes for its employees living outside of Yosemite Valley.
- Recommending that the YARTS organization be formalized under a Joint Powers Agreement, to be negotiated over the next several months.

- Completing two seasons of a year-round survey effort that documents the travel behavior of visitors to Yosemite National Park. This data base will be completed in the final planning phase.
- Analyzing the economic impacts of the “do nothing” and action alternatives and identified opportunities for maximizing economic gains.

The final phase of planning is expected to begin in July 1998. That phase will correspond with YARTS’ transition from a planning and policy agency to an implementation agency. The initial demonstration project or early deployment service, scheduled to operate during the summer of 1999, will be an early focus of that effort, as will the development of the Joint Power’s Agreement and necessary environmental work in support of phased implementation. The remainder of the Phase 3 study will be dedicated to finalizing operational details as needed for implementing the preferred alternative, with a goal of implementing the first phase in the summer of 2000.

The accomplishments of the YARTS organization are summarized on the time line presented in Figure 2-2.

THE MAJOR INVESTMENT STUDY (MIS) PLANNING PROCESS

A Major Investment Study requires is a rigorous process for evaluating transportation alternatives. This process must be used where federal funds are required for project implementation. While no federal funds have been sought for implementation to date, completing the planning process in this manner ensures that YARTS will be a candidate for federal funds at the appropriate time.

While there is substantial flexibility in the way a Major Investment Study is approached, there are several key issues that must always be included. The range, scope and level of detail for an MIS is decided through a collaborative process involving all of the parties responsible for the completion of the study, including funding agencies. The YARTS Management Board has included broad representation from both the local jurisdictions who have responsibility for implementation of the plan and funding agencies who have provided not only financial support, but extensive technical support as well.

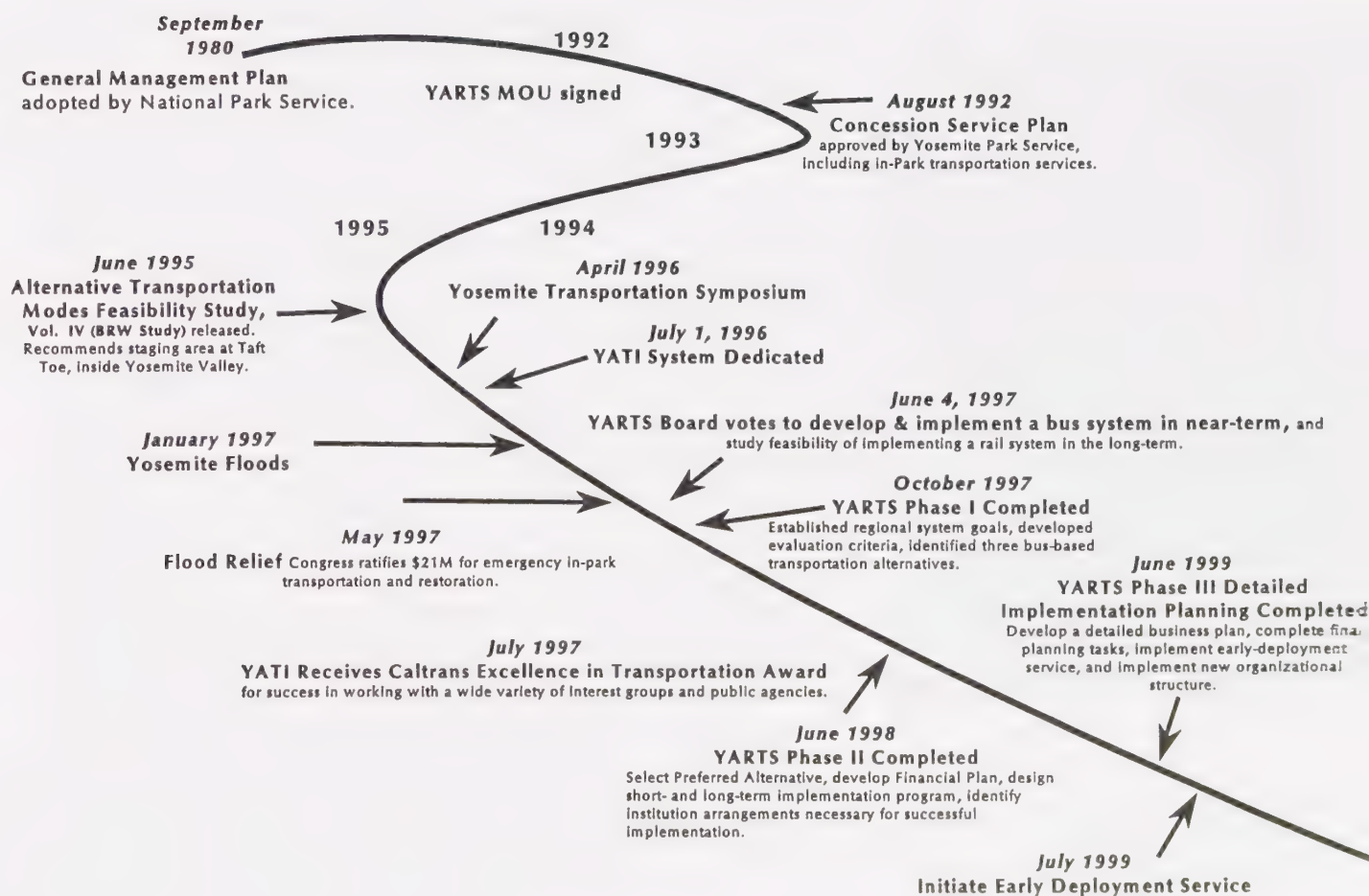
Key areas to be covered in a Major Investment Study include:

- Documentation of Purpose and Need
- Evaluation methodology
- Definition of alternatives
- Public Involvement Process

- Environmental Analysis
- Transportation Impact Analysis
- Cost Analysis
- Financial Analysis
- Evaluation

This Short and Long Range Transit plan includes all of these elements, in summary form. Additional elements, including those relevant to system implementation are also included. Many of these elements were addressed in detail in one of the 15 working papers that precede this Short and Long Range Transit Plan. Detailed information on specific topics can be found in those working papers, referenced in Chapter 1 of this report.

FIGURE 2-2
TIMELINE OF YARTS MILESTONES



RELATIONSHIP TO OTHER STUDIES

Relationship to the Valley Implementation Plan

The YARTS process is a long standing evolutionary planning effort that brings together the interests of five gateway counties and the National Park Service. The need for results from this process was heightened following the flooding which occurred in the region during the winter of 1996-1997. That event was important for several reasons. Damage to the area was extensive, both within and outside of the Park. The gateway communities suffered, not only in terms of physical damage, but also economically. The economic impacts continued not only through the slow winter season, but through the following spring as well, when public perception that the area had been irreparably damaged continued to impact tourism.

The flood damage to the Yosemite Valley was extensive enough for Congress to appropriate \$190 million for flood relief and improvements within Yosemite. The funds were to focus on implementation of the Park's General Management Plan, a nearly 20-year-old land use plan that called for extensive changes in land uses, circulation and access to the Valley. In November 1997, the National Park Service issued the Draft Valley Implementation Plan (VIP), an environmental document describing proposed changes in land use, circulation and access to the Yosemite Valley. The VIP is designed to serve as a blueprint for the expenditure of the Congressional Earmark.

The Valley Implementation Plan was developed by the National Park Service, largely independent of the YARTS planning effort. The VIP document is a federally required environmental document that primarily addresses physical changes within the Valley, with a focus on land use changes and Valley restoration. The plan addresses access as a function that supports the land use changes recommended for the Valley. Regional transportation is also addressed, with a suggestion that regional transit may ultimately be the primary access mode for day visitors (those not overnighting within the National Park). Since YARTS planning was still underway, no specific information was provided in the VIP about the future YARTS service, or how that service would be funded. However, the VIP does designate YARTS as the lead effort in developing a regional transportation strategy.

YARTS' activities provide the gateway communities with the opportunity to influence access decisions in the National Park by creating constructive alternatives to auto limits and gate closures.

YARTS planning has been accelerated to ensure that the impacted region has ample opportunity to shape the final policies and projects that will be initiated in Yosemite as a result of the VIP. YARTS activities provide the gateway communities with the opportunity to

influence access decisions to the National Park by creating constructive alternatives to auto limits and gate closures.

Because the VIP and YARTS studies both deal with access to the National Park, there has been some public confusion about the relationship of the studies. YARTS has continued its focus on regional transportation and local economics. The results of this phase of the YARTS plan must now be incorporated into the Park's planning effort. The YARTS plan does not endorse or specifically object to the recommendations in the VIP, but rather is developed in parallel, with a greater emphasis on the needs of local constituents. Ultimately, the two separate plans must come to a common understanding about what a regional transit system can do and how it can be implemented in a way that is consistent with regional goals.

Local Planning Efforts

While YARTS has focused on regional transportation issues, it cannot be fully implemented without extensive coordinating efforts with the local jurisdictions. Even after a JPA is formed, YARTS will not assume control over local land use decisions, which are critical to the growth and development of YARTS service.

Each jurisdiction has recognized the YARTS planning process through their general planning process. However, the individual jurisdictions have invested different levels of effort in identifying whether, where and to what extent intercept parking facilities will be located in their counties. These decisions will be critical to determining the number of people YARTS can accommodate, and the viability of expanded phases of YARTS service.

Private Transit Operators

The YARTS plan, described in this report, included extensive involvement of private transit operators. The initial phases of YARTS assume that private operators will be willing to assume a significant amount of risk in providing sanctioned YARTS service. The amount and quality of YARTS service offered in the early phases of development will depend largely on the willingness of private operators to participate in YARTS.

Figure 2-3 presents a very generalized diagram of roles and responsibilities for implementing YARTS service, focusing on the interrelationships of planning efforts. Specific tasks for each responsible entity are provided in the Short Range Plan section of this report.

FIGURE 2-3
YARTS ROLES AND RESPONSIBILITIES

Responsibility	Staff/Consultants	YARTS Board	Local Jurisdictions	National Park	Private Operators	Others
Refine service levels in each corridor	✓	✗			✓	
Define capital needs (<i>buses & facilities</i>)	✗	✗				
Develop RFPs for vendors	✓	✓				
Respond to RFPs and provide service					✗	
Market services	✗	✗	✓	✓	✓	Local Business Local Chambers Lodging Providers
Refine stops in local areas		✓	✗		✓	
Refine route/stops in National Park		✓		✗	✓	
Define Park pricing for transit riders (NPS & YCS)				✗		
Identify other incentives		✓	✗	✗	✓	Local Business
Manage/monitor service quality	✗	✗			✓	Riders
Determine Park auto access policy		✓	✓	✗		
Develop employee incentives (NPS & YCS)				✗		
Develop JPA agreement	✓	✗	✗			
Provide on-going funding/support	✓	✓	✓	✓		Funding Agencies Private Sources

✗ Lead Responsibility

✓ Support Role

PUBLIC INPUT

Public involvement has been critical to the YARTS planning process. This has been encouraged in several ways:

- All meetings of the Technical and Citizens Advisory Committee and YARTS Management Board are public meetings that are well attended and noticed. More than 500 individuals receive monthly agendas and meeting information. Public comment is encouraged at all YARTS meetings.
- Information has been provided on the YATI website, including downloadable versions of all working papers. Opportunities for comment on any YARTS topic have been available through e-mail, as well as by conventional means.
- A quarterly YARTS newsletter has been published and distributed to all persons on the mailing list, as well as many local agencies. The newsletter is also available on the World Wide Web.
- Public workshops, for both in-area and out-of-area constituents, have been conducted as part of the YARTS process. Two workshops were held in each of the five YARTS counties during the Phase 1 planning effort. Two additional local workshops will be completed as part of the Phase 2 effort. The first set of Phase 2 workshops was completed in the winter of 1997, with an additional set of workshops currently underway in conjunction with the local transportation commissions of each county. Three out-of-area workshops were also conducted to ensure that the visitors and customers of gateway businesses had a direct opportunity to comment on the YARTS process.

The public involvement process was described in Working Paper #14 - Public Workshop Summary. The following summarizes the results of the public involvement process, and describes how it has been incorporated into the YARTS findings.

The public involvement process included a number of key objectives. The primary objective was to provide a conduit for input from those potentially affected by the YARTS alternatives to policy makers and the study team, ensuring that the recommended option would be shaped by the needs of those that would be affected by it. Public workshops provided the opportunity for two-way communication, allowing the study team to provide accurate information about the YARTS planning process, dispelling "misinformation" and providing local residents with a level of comfort about the YARTS study, as well as providing a meaningful opportunity for local residents to shape the YARTS outcome.

Specific objectives of the outreach process included:

- Provide background information about the YARTS process clarifying the differences between YARTS and the VIP process.

- Provide a project status report, identifying where we are in the process and how public input is integrated into the planning process.
- Solicit general input into the YARTS process and concept.
- Solicit specific input about the service mission for YARTS and the amenities required to achieve that mission. This specific information was instrumental in forming the alternatives presented to the Management Committee in April.
- Identify local concerns that must be addressed to ensure the success of a YARTS service in a particular corridor.

The workshops included an interactive exercise specifically aimed at generating useful input on the final two points presented above. Although there were some differences between the corridors, and between small groups participating within each individual meeting, the mission statement accepted by the YARTS board closely reflected the comments received in the public workshops²:

YARTS will provide a positive alternative method of access to Yosemite National Park, carrying visitors, employees and residents. YARTS service is not intended to replace auto access or trans-Sierra travel, but is intended to provide a viable alternative that offers a positive experience, emphasizing comfort and convenience for riders while guaranteeing access into the Park.

Most workshop attendees strongly supported a voluntary system that would encourage ridership through incentives and the quality of service. Participants in the public workshops completed an exercise which defined the characteristics needed for a voluntary system to succeed. These characteristics were considered very carefully in evaluating alternatives. The following describes the system qualities that the public felt were most necessary for transit to compete with the auto for trips into Yosemite:

- **Voluntary and Incentive Based** - While a minority of participants felt that the system would have to be mandatory to have a substantial impact, most felt that there was a need for a balance of access modes to Yosemite.
- **Minimize Cost** - Although there was almost universal support for a very high quality, comfortable and convenient service, participants wanted to ensure that the service would be cost-competitive with driving.
- **Serve employees as well as visitors** - Participants on all corridors agreed that the YARTS system should be a component in reducing employee commute trips to

²Reflects the comments received by the Technical and Citizens Advisory Committee and Management Board.

Yosemite. There was substantial support for policies that would encourage alternative commutes for Park employees.

- **Exceptional vehicles are required for a positive experience** - This general category included some specific recommendations such as offering storage for gear and bicycles, multi-channel audio programming, comfortable seating with overhead storage for small items, big windows, and other amenities for comfort and convenience.
- **Offer convenient connections and a reliable service** - This category included recommendations for frequent service, running on a clear schedule, running early and late enough to be useful, and stopping at key lodging locations, rather than making everyone drive to intercept locations.
- **Seamless marketing should make transit part of the Yosemite experience** - Again, this concept includes many individual suggestions ranging from selling admission tickets integrated with the bus fare, to marketing the system widely, to including voucher opportunities for both bus rides and Park admission for foreign tourists.
- **Focus on seasonality** - The majority of participants wanted the service to focus on the summer season when crowding is a particular problem. There was considerable support in some corridors for providing some service either year-round or a summer/winter service that would provide ski service in addition to the summer season.

These characteristics were directly reflected in the choice of a preferred alternative for YARTS service.

CHAPTER 3: ALTERNATIVES CONSIDERED

The YARTS Major Investment Study developed three action alternatives and a No Project option building on the findings of previous study phases. The action alternatives were designed to provide varying levels of transit access within the gateway communities and to Yosemite National Park. All action alternatives were designed to be technically feasible, although not all alternatives were equally desirable based on the evaluation criteria discussed in the Chapter 4 of this report.

This Short and Long Range Transit Plan focuses on the implementation of the Phased Transit Alternative which has been designated as the locally preferred alternative. To satisfy the requirements of the MIS, all of the alternatives considered are summarized in this chapter. Additional information about each of the alternatives can be found in Working Paper #12 - Refined Options and Working Paper #15 - Evaluation of Alternatives.

The alternatives considered by this Major Investment Study spanned a full range from a “no project” option to a year-round mandatory transit system.

NO PROJECT ALTERNATIVE

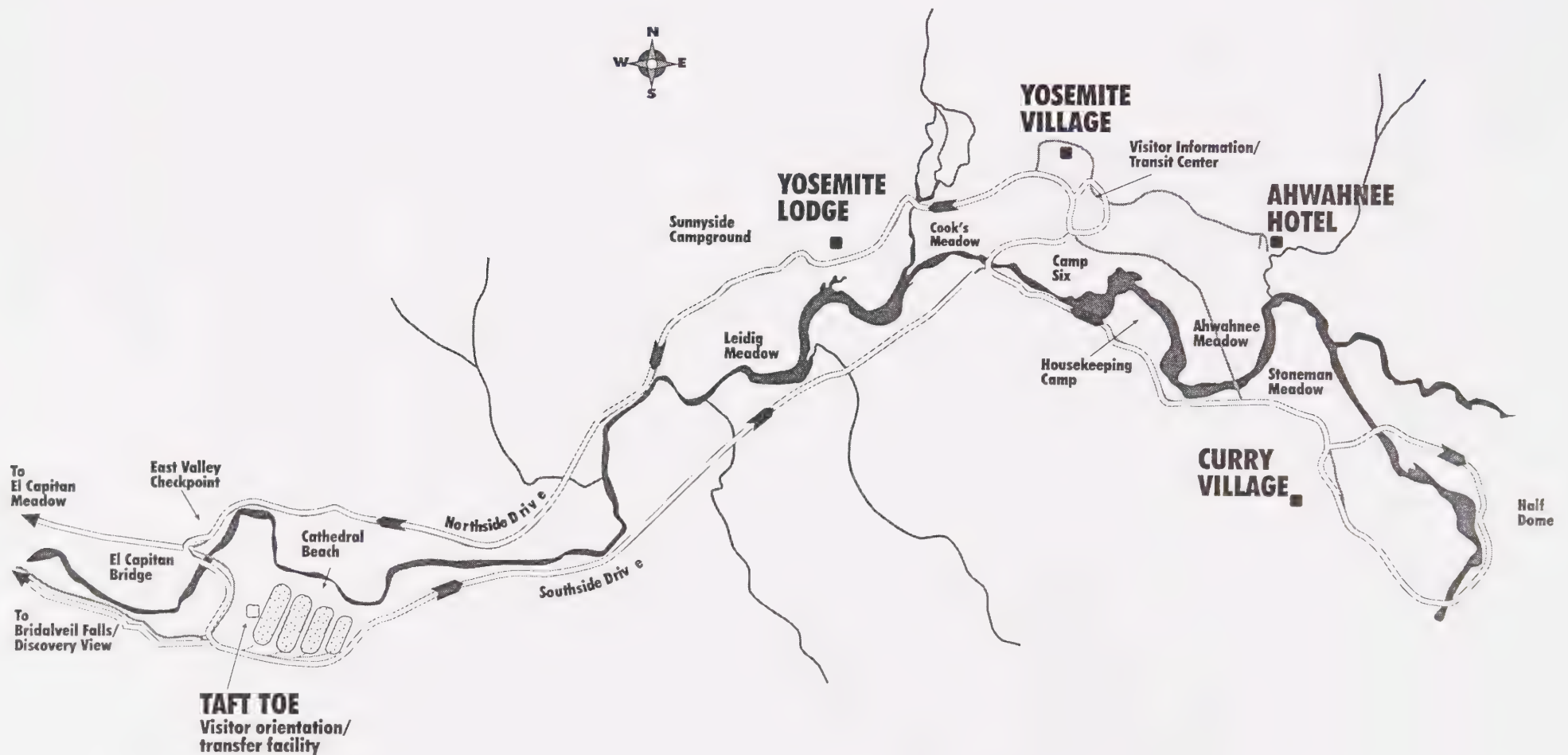
A “No Project” alternative does not mean that things will always remain as they are now. For the purposes of the YARTS planning effort, it was assumed that “No Project” means that the YARTS Board disbands and stops pursuing a regional transit solution in each of the four gateway corridors. It was also assumed that the National Park Service would continue its efforts to implement the access restrictions outlined in the Valley Implementation Plan in the absence of a YARTS project. The National Park Service has committed to these actions in their VIP document.

These basic assumptions have a number of implications, which are briefly summarized below:

Taft Toe parking built and cap on motor vehicles enforced

According to the VIP, if YARTS is not successful, the Park Service will build a large intercept parking facility at the west entrance to the Valley at Taft Toe and proceed with the elimination of day visitor parking from the east end of the Valley. While parking for 2,300 day use vehicles would be removed in the east end, Taft Toe would contain no more than 1,940 spaces (1,800 for day use visitors, 120 for back country visitors, and 20 for tour buses). When these 1,940 spaces are full, only visitors with overnight reservations would be allowed to drive into the Valley. Figure 3-1 shows Yosemite Valley, including the proposed Taft Toe location, lodging locations, and many of the principal scenic attractions in the Valley.

FIGURE 3-1
YOSEMITE VALLEY ATTRACTIONS



While the VIP document has not been certified and may change, it is the only written statement of the Park's plan to control access. While this may not be implemented in the short term, it is in fact a possible outcome of a failed YARTS process, and is therefore considered in this analysis.

Additional private "transit" services may develop

While the VIP is silent on the issue of whether passengers of "transit" vehicles may be allowed into the Valley after the parking limit is reached, we can assume that existing VIA buses will continue to have access at all times, as they did during the gate closures in previous years. Moreover, we can also assume that the Park Service will begin sanctioning additional transit services, now that it has an acceptable definition as to what distinguishes "transit" versus "tour" services. As parking restrictions are enacted in the Valley, no doubt more private tour operators will seek to become transit providers, in addition to those whose applications are already pending.

As a member of the YARTS board, the Park Service has already committed – at least in principle – to providing significant benefits to transit providers:

- an elimination of the \$300 a day entrance fee now charged to tour buses
- a reduction in the per person entrance fees to \$3 a person or \$6 a group
- guaranteed access to the Valley despite gate closures
- direct access to the "primary node" of the Valley

If the Park Service continues to offer these benefits to transit providers, even if YARTS does not develop a regional system, privately provided transit services may naturally develop. Private services would be designed to meet the strong demand for Yosemite visitation that will exist beyond the limits imposed by the Park. Absent close-in staging areas, service would develop to readily available staging areas such as those that Oakdale, Merced and Fresno have been eager to provide. Also absent close-in staging areas, service would develop to major urban centers, including the San Francisco Bay Area and Los Angeles Basin, as existing tour operators shift their method of operating to take advantage of the benefits offered to transit providers.

If service does develop between the Valley and major centers such as Oakdale, Merced and Fresno, smaller communities along the way may negotiate to have the buses stop at their facilities as well. However, without the YARTS Board sanctioning these services along with the Park Service, communities would have no way to compel operators to add stops. As a result, communities expected to get significant levels of transit service in each of the action alternatives would likely get little, if any, service in a No Project Alternative.

The result will be a system designed solely by market forces, without regard to the needs of local jurisdictions considered by the action alternatives.

In addition to the No Project Alternative, three action alternatives were considered. These are summarized below. Figure 3-2 summarizes the characteristics of each of the three action alternatives.

FIGURE 3-2
COMPARISON OF ALTERNATIVES

	Alternative 1 Traffic Management	Alternative 2 – Phased Transit Service				Alternative 3 Maximum Transit Access
		Phase 0 Pre- Implementation	Phase 1 Initial Staging	Phase 2 Valley Parking Restriction	Phase 3 Further Parking Restriction	
Parking Required	3,200	0	740	4,150	6,000	10,000
Operating Cost (maximum)	\$3.4M	\$0.8M	\$1.5M	\$6.9M	\$13.7M	\$73.73M
Annual Passengers (maximum)	487,000	74,400	121,700	838,700	1,421,500	4,608,000
Maximum Bus Trips to Valley/Hour	18	4	8	14	48	48
Cost/Passenger ¹	\$13.43	\$12.23	\$13.72	\$14.04	\$15.30	\$16.00
Buses Required	73	17	33	125	217	390

¹Based on maximum ridership and maximum cost estimate. Detailed description includes a range.

ALTERNATIVE 1: TRAFFIC MANAGEMENT PLAN

This alternative is designed to serve only “overflow” visitors requiring access to the Valley after vehicle capacity has been reached. Except for existing connections to intermodal centers, no transit service is provided until automobile congestion in the Valley becomes so severe that the Park Service closes it off to further day-visitor vehicles. At that time, bus service begins, and changeable message signs direct motorists to the staging areas in use at the time. Bus service is provided only to the closest available staging areas. Service is extended to more distant staging areas only as the closer parking lots fill.

For the purposes of costing this alternative, “Valley vehicle capacity” was assumed to be about 6,000 day-use vehicles, as was described in the GMP. We assume that the vast majority of visitors will continue to drive to the Valley until this number is reached.

The Traffic Management Plan maximizes auto access into the Valley, providing transit service only when Valley capacity is exceeded.

Once the vehicle capacity is reached, YARTS use becomes mandatory. For this reason, it does not need to be as much of a “quality” service as the purely voluntary service described in Alternative 2. For comparative purposes, however, we use the same figure of \$55 a vehicle hour (in 1998 dollars) for each alternative. If YARTS could take advantage of otherwise unused school buses or ski resort coaches, costs could be somewhat lower. Since labor is the largest component of this cost, however, the overall price will not vary dramatically.

This service would operate during peak season only, and could carry nearly 500,000 riders annually, if the Park more strictly enforces its General Management Plan capacity for auto access of about 6,000 cars per day. The cost of this service is estimated at about \$3.4M per year.

ALTERNATIVE 2: PHASED TRANSIT SERVICE

Two primary factors guide the Phased Alternative: It is a voluntary system, and it starts small and then grows based on the proven success of its first phases. As a voluntary system it is based on providing incentives to encourage transit ridership. The hours of operation are set based on the needs of both visitors and employees. The operating period is at first limited to peak periods, then ultimately expands service in the peak and to the shoulder periods.

The Phased Alternative minimizes risk by starting small and building a market through incentives.

At first service is focused on existing lodging locations, then it is expanded to serve existing or easily developed parking locations. Only in later phases are large, complex staging areas developed.

As a voluntary service, this alternative must be of the highest quality in order to encourage visitors to use transit. Buses will be equipped with ample inside and under-vehicle storage, reclining seats, reading lights and interpretive media.

The initial "Phase 0" service is designed essentially as the second year of a two year demonstration project, which begins in 1999. Phase 0 would expand only slightly on the service offered in 1999. It would be a much less ambitious service than the Traffic Management Option, but may be enough service to eliminate gate closures. No new parking infrastructure is added, and service is provided through "sanctioned" private operators.

Phase 0 will carry about 75,000 annual riders, at a cost of between \$600,000 and \$800,000 per year. A total of up to 17 buses will be required to operate the service.

Phase 1 begins the intercept parking and staging system, in which parking areas are provided where motorists can access an expanded service. As with the initial phase, service is expected to be provided by private operators using their own vehicles. A total of 33 peak buses will be required to operate this service. The expanded Phase 1 service will carry up to over 121,000 riders annually, enough to eliminate gate closures. The cost of this service will be about \$1.3 to \$1.5M.

In the second and third phases, the Park Service may begin to restrict parking in the Valley. Service continues to be voluntary, and the quality concept is maintained. The higher level of service required to meet the substantially increased demand results in a need for 125 buses. At this time, YARTS would purchase buses to ensure that the quality of the vehicle could be consistently maintained, and that alternative fuels would be used. Operating costs increase to over \$7M per year, and capital costs would increase to over \$60M. A total of over 4,000 parking spaces region-wide would be required to meet demand, which is expected to exceed 838,000 passengers.

The jump to Phase 3 is marked by additional restrictions in parking within the Valley, or by the success of the previous phase. At this point, 6,000 parking spaces are needed region-wide and are served by a fleet of 217 peak vehicles. Operating costs would exceed \$13 M per year, and capital costs would increase to nearly \$100 million. A total of over 1.4M annual riders would use the system in this Phase.

ALTERNATIVE 3: MAXIMUM TRANSIT ACCESS

The Maximum Transit Access alternative is the only action alternative that assumes that most day visitors to the National Park will arrive via transit. This alternative is most consistent with the assumptions in the Valley Implementation Plan that suggest that regional transit service may ultimately replace auto access for most day visitors. Because the characteristics of this system differ so dramatically from the voluntary incentives of Alternative 2, it cannot be considered as a natural "final phase" of that phased alternative.

This alternative assumes that transit is the mandated access mode for most day visitors to Yosemite Valley. Auto access would be maintained to other parts of the Park, but only those with overnight reservations or special permits would be allowed to drive into the Valley itself.

This alternative is larger, more extensive and more expensive than the other alternatives because it must absorb all current day visitors plus all of the growth in visitation that is expected to occur in the future. Under this alternative, 390 peak buses and 10,000 regional parking spaces are required to accommodate demand. Buses would arrive about every 90 seconds in the Valley, throughout most of the day. The total operating cost of the system would be over \$70M, and the service would carry 4.6 million riders per year.

The two most significant differences between this alternative and the others are as follows:

- A very high number of parking spaces would need to be developed in all four corridors. A total of 10,000 spaces is needed throughout the region. If sites can be found for these parking spaces near the Valley, the system will be relatively inexpensive. But if large numbers of parking spaces can only be found in distant communities such as Merced, Fresno, Oakdale and Lee Vining, the cost of operating the transit system increases dramatically.
- Unlike the other alternatives, which strive to meet the seasonal peaks in demand, this alternative provides year-round service. Year-round service allows for the complete removal of the infrastructure for day visitor parking in the Valley, providing the greatest restoration opportunities in the Valley. To the extent that the development of 10,000 parking spaces outside the Valley disturbs viable existing or potential habitat, this alternative may shift environmental problems from the Valley to the corridors.

ASSUMPTIONS

Each of the alternatives is based on a consistent set of assumptions that helped to estimate the costs and benefits of each alternative. The most important of these assumptions are summarized here:

1. Growth in visitation

Nelson\Nygaard refined the growth projections of both the Phase I report and the report of the Wilderness Society, using 17 years worth of Park Service data and projecting growth trends for each month separately. Beginning with 1997 data (rather than 1994 data as was used in Phase 1), we predict higher numbers of visitors in each future year, though the actual growth rate remains conservative, at an average rate of about 4.3% each year.

How the Park will deal with this growth, or potential for growth, is different under the different alternatives. In the No Project alternative, we assume that visitation decreases to GMP levels, based on an aggressive campaign by the Park Service to limit visitation to that level. In the other alternatives, we assume that the Park Service will not restrict the number of actual people visiting the Valley during the next five years, as long as most of this growth occurs through transit ridership. A subsequent additional analysis done on economic growth potential – Working Paper #17 – also includes an assessment of an alternative which would hold visitation at 1996 levels.

2. Unrestricted auto access to other parts of Park

Although we assume that the Park Service will limit automobile access to the Valley at various levels, we assume that there will continue to be unlimited access to other parts of the Park, as well as unrestricted trans-Sierra travel.

To restrict access to the Valley while other areas of the Park remain open, the Park Service will need to develop a detailed access management plan. Although there are many different ways the Park may develop this plan, one option would be for the Park to control access to the Valley independently of access to the Park. To accomplish this, an additional, “internal” entrance station could be built just east of Bridalveil Falls on Southside Drive. It is at this point that motorists would be turned back from the Valley if congestion levels reach the Park’s stated limit. The Big Oak Flat, Tioga Pass, Arch Rock and South entrance stations would remain open at all times regardless of congestion in the Valley. Valley congestion would therefore not impact access to Park destinations outside the Valley, such as Wawona, Badger Pass or Tuolumne Meadows.

The Park may decide to issue vehicle permits at its four main entrance stations that would allow motorists to pass through the Bridalveil Gate, as well as to Park in the Valley. Vehicles without a Valley permit would be free, for example, to travel from the 41 corridor to Bridalveil Falls, then go up 120 East to Tuolumne Meadows. If transit service were provided, they could

also leave their car at Tuolumne Meadows or the 120 Junction area and take a shuttle into the Valley. **This is only one alternative for access control to the Valley, and is not a recommendation.**

3. Does not assume day use reservation system

The alternatives developed in this paper do not assume or require a day use system. However, none of the YARTS alternatives preclude a day use reservations system or any other access management concept. The analysis of alternatives does assume that the Park will be able to control access to the Valley, independent of access to other areas of the Park.

4. Quality of buses

Based on our public workshops and stakeholder interviews, we assume that any form of voluntary YARTS service must be of very high quality. The buses used would be over-the-road-type coaches (or equivalent), with comfortable, high-back, reclining seats, reading lights, ample storage, interpretive information and other amenities. If YARTS use becomes mandatory, quality is less critical, but is still important as an extension of the "Park experience." In a mandatory service, some of the amenities may be traded off to reduce the cost of the service.

5. Cost per hour of transit service

Based on extensive peer experience, we estimate that a bus plus driver will cost between \$50 and \$60 an hour to operate. We also assume that a standard fuel over-the-road coach will cost \$350,000, and operating under an alternative fuel will add \$60,000. In some corridors and at some phases, smaller buses may be more appropriate. However, for flexibility of deployment and fleet consistency, only one cost was used. For the air quality assessment, the impact of both full sized diesel and CNG vehicles are provided. Actual impacts will vary depending on the fleet mix.

6. Timing and implementation phasing will impact costs

All costs shown in this paper are in current, 1998 dollars, to allow for reasonable comparisons between alternatives and phases. The timing of actual implementation will affect actual costs, as the effect of inflation is not considered. This will influence both capital and operating costs.

7. Use the closest-available staging areas first

In order to reduce costs, we assume that YARTS will only run as far as the closest available staging areas to the Valley. As demand exceeds supply of the closest-in area, YARTS service gets extended to the next-closest.

As a result of this assumption, cost per passenger plots along a jagged line as service levels increase. That is, as YARTS attracts more passengers, cost per passenger declines until the

point when a new staging area needs to be created farther away. At that point, cost per passenger and cost per service hour increase dramatically. As passenger demand continues to rise, cost per passenger will decline again until another staging area needs to be served.

This assumption does not take into account the political or economic goals of outlying communities, who might want a staging area even when passenger demand does not necessitate it. Based on comments from our public workshops and stakeholder interviews, some outlying communities may be willing to provide some level of support to YARTS, such as constructing their own staging areas and perhaps paying the marginal cost of service, in order to attract service sooner than later. Therefore, while cost estimates are developed consistently and allow for comparison between alternatives, final costs cannot be estimated until parking locations are identified.

8. Operation inside the Park

We assume that YARTS will make stops not just in Yosemite Valley, but will serve other key attractions such as Big Trees and Wawona. In the Valley itself, YARTS will run all the way into the east end to, for example, the existing Visitors' Center, unless or until the Valley's primary node is relocated. This may result in YARTS service replacing or supplementing services between the Valley and other areas of the Park.

We also assume that visitors will be able to board and deboard as many times as desired for one round trip fare. In this way, we can encourage visitation to non-Valley locations in the Park, as well as attractions and communities outside the Park in the gateway corridors.

9. Coordination with Park Shuttle

YARTS services will be coordinated with the intra-park shuttles, not only within the Valley, but between Valley locations and other Park locations. The availability of YARTS service may allow the Park to rethink service levels to internal destinations such as Tuolumne Meadows and Wawona, and provides the opportunity for seamless transportation.

10. Roadway Geometrics

This paper assumes that roadway geometrics within and outside of the Park are capable of handling proposed YARTS volumes. An additional traffic study may be required, particularly within the Park, where the circulation of large numbers of buses has not been fully addressed.

11. Conservative estimates

All of the numbers presented in this report are based on our most conservative estimates, including service span, operating costs, capital costs, potential ridership, potential visitation growth, and so on. Significant cost savings can be achieved, for example, by trimming back the service span in several of the alternatives from three months (mid-June through mid-September) to two months (July and August) in order to concentrate on the highest peaks.

Environmental and economic impacts have also been estimated conservatively so as to not overstate benefits. However it should be noted that all benefits may take time to accrue and are assumed to be the result of a "mature" system.

12. Farebox Recovery Estimates

Farebox recovery projections are based on the proposed fare structure which results in average fares that range from \$9 per person round trip to as much as \$25 per person round trip, depending on the corridor and the distance of the trip. The fare structure recommended in this paper is not as important as the average fare recovered, which will influence both demand and farebox recovery. It is also important to note that farebox recovery calculations are based on a combination of fares and a 12-year amortization of any bus capital costs incurred in the phases or alternatives that require buses to be purchased by YARTS.

13. Other costs

The costs shown in this chapter reflect only the direct operations and maintenance cost for contracting transit operation, plus the capital costs for purchasing equipment. There are other costs associated with providing a transit service. These are significant and include the costs of administration, monitoring and marketing the service. These substantial costs are considered in detail for the preferred alternative in Chapter 5 of this report.

In addition, the cost of modifying the Yosemite Area Traveler Information (YATI) system, or making other changes in information systems are not included in this paper. In some cases, the costs could be substantial. The role of YATI in ensuring a successful YARTS operation is discussed later in this plan.

CHAPTER 4: EVALUATION PROCESS

The evaluation of alternatives is a critical component of a Major Investment Strategy. The alternatives were all evaluated based on a consistent set of criteria developed with the Management Board and their advisory committee, reflecting substantial public input. Working Paper #15, "Evaluation of Alternatives," describes the evaluation process and results in detail. This Chapter provides a summary of that process, and the recommended alternative.

Evaluation criteria

When evaluating alternatives, the criteria selected for comparison are critically important, since an alternative that ranks high based on one set of criteria may do poorly against another. For example, an evaluation system that favors cost effectiveness may develop a very different result from one that favors absolute ridership.

At their March meeting, the YARTS Management Board accepted the criteria illustrated in Figure 4-1 for evaluating and comparing the alternatives.

Care was taken to develop a set of evaluation criteria that reflects the range of values of the YARTS board, and is not heavily biased to one type of predictor.

Working Paper #15, "Evaluation of Alternatives," presents detailed quantitative assessments of each alternative. It should be noted that no amount of analysis can substitute for testing in the field. The huge fluctuations in visitation to the Yosemite area that occur from one year to the next and have nothing to do with transportation will continue to occur, even after a YARTS alternative is implemented. However, the evaluation process compares alternatives using a consistent set of criteria and state-of-the-practice evaluation techniques.

The most important question of all is not whether one alternative scores better than another using a limited set of criteria, but rather, which alternative(s) has the best opportunity to fulfill YARTS mission:

YARTS MISSION STATEMENT: *YARTS will provide a positive alternative method of access to Yosemite National Park, carrying visitors, employees, and residents. YARTS service is not intended to replace auto access or trans-Sierra travel, but is intended to provide a viable alternative, that will provide a positive experience, emphasizing comfort and convenience for users, while guaranteeing access into the Park.*

FIGURE 4-1
EVALUATION CRITERIA

Criterion	Quantitative or Qualitative Assessment
Service Effectiveness <ul style="list-style-type: none"> • Total annual ridership • Peak day vehicles removed • Seasonal vehicles removed • Annual visitation increase • Changes in visitor spending • Per cent market capture 	Quantitative Quantitative Quantitative Quantitative Quantitative Quantitative
Service Efficiency <ul style="list-style-type: none"> • Cost per rider • Boardings per service hour • Subsidy required • Cost per vehicle removed 	Quantitative Quantitative Quantitative Quantitative
Environmental Preservation <ul style="list-style-type: none"> • Acres of parking removed for restoration • Air quality 	Quantitative Quantitative/Qualitative
Quality of Service <ul style="list-style-type: none"> • Provides a positive visitor experience • Customer satisfaction regarding: <ul style="list-style-type: none"> – comfort – storage – frequency – interpretive information – staging area quality – availability of information – accessibility – reliability 	Qualitative Qualitative

EVALUATION OF ALTERNATIVES

Each alternative was evaluated based on assessments of each of the criteria listed above. At the conclusion of the evaluation, the alternatives were ranked on a scale of 1-5 (five being the most desirable result) under each of the criteria. Each of the alternatives were shown to have strengths and weaknesses. These are summarized in Figure 4-2.

Figure 4-3 shows the relative ranking of alternatives. The table shows that while all of the action alternatives are feasible, the Phased Transit Alternative (Alternative 2) has the best chance for meeting the YARTS goals.

Quantitative results from the evaluation of each alternative are provided in the appendix. The following provides a very general summary of the evaluation results, and recommends Alternative 2 - Phased Transit Service as the preferred alternative for YARTS implementation. This preferred alternative is more fully developed through the Short and Long Range Plan chapters which follow. More detailed information, including evaluation methodology and detailed quantitative information can be found in Working Paper #15 - "Evaluation of Alternatives".

FIGURE 4-2
STRENGTHS AND WEAKNESSES OF YARTS ALTERNATIVES

	No Project	Alternative 1 Traffic Management Plan	Alternative 2 Phased Transit Service	Alternative 3 Maximum Transit Access
Strengths	<ul style="list-style-type: none"> Allows for restoration and environmental improvements described in the VIP. Does not require a YARTS organization; allows private services to develop if a market exists. Provides for an uncrowded, more natural experience for those that are able to access Yosemite, due to reductions of visitation below current levels. 	<ul style="list-style-type: none"> Implements minimum service required to meet "overflow demand." Highly efficient service. Allows continuation of maximum auto access. Provides an access option after Park reaches auto limit. Allows for growth in visitation and increased regional economic base. Allows for restoration and environmental improvements described in the VIP. 	<ul style="list-style-type: none"> Minimizes risk by implementing service over time. Efficient and cost effective service that proves transit can work before making substantial investments. Meets YARTS desire for a completely voluntary system. Allows maximum potential for growth and economic benefits. Focuses on accommodating lodgers and employee travel. 	<ul style="list-style-type: none"> Highest ridership alternative, maximizing potential to complete restorations and change access mode without restricting visitation. All year service provides highest benefit for resident and employee mobility. Offers greatest ultimate benefits in habitat restoration and air quality.

FIGURE 4-2
STRENGTHS AND WEAKNESSES OF YARTS ALTERNATIVES
(Continued)

	No Project	Alternative 1 Traffic Management Plan	Alternative 2 Phased Transit Service	Alternative 3 Maximum Transit Access
Weaknesses	<ul style="list-style-type: none"> Potentially devastating impact on regional economy. Severely restricts visitation over current levels, denying many people the opportunity to visit Yosemite. Services would not develop with interest in corridor equity, expressed by YARTS. Services would not be designed to meet other YARTS goals. Retains auto cold starts within the Valley, with their environmental consequences. 	<ul style="list-style-type: none"> Highly complex to administer. Dependant on real time information. Dependant on day excursion users changing access habits. Requires development of parking that remains idle most days. Not suited for routine trips by employees or local residents 	<ul style="list-style-type: none"> Small start does not make substantial early impact in congestion, etc. Requires close cooperation with Park planning process to ensure access is retained during early phases. Risk that visitors won't change their habits, even when incentives are provided. Economic impacts may be uneven and tied to parking locations and lodging. 	<ul style="list-style-type: none"> Very high risk of short term visitation volatility, as current visitors may not change habits. High risk on investment in over 10,000 parking spaces. Environmental gains are partially offset by large bus fleets and large parking needs.

FIGURE 4-3 COMPARISON OF ALTERNATIVES

Relative rankings 1-5; 5 = highest ranking, 1 = lowest ranking

Criterion	No Project	Alternative 1 Traffic Management	Alternative 2 Phased Transit	Alternative 3 Maximum Transit
SERVICE EFFECTIVENESS				
Ridership	1	3	4	5
Day Vehicles Removed	2	3	4	5
Visitation Increase	1	4	4	3
Visitor Spending	1	3	5	3
Market Capture	1	2	4	5
SERVICE EFFECTIVENESS SUBTOTAL	6	15	21	21
SERVICE EFFICIENCY				
Cost per Rider	2	5	4	3
Boardings Per Service Hour	1	5	4	3
Subsidy Required	5	3	4	2
Cost per Vehicle Removed	5	3	3	2
Intermodal Connections	1	1	3	5
Serves Multiple Goals	1	2	3	5
SERVICE EFFICIENCY SUBTOTAL	15	19	21	20
ENVIRONMENTAL PRESERVATION				
Restoration Potential	4	5	4	3
Air Quality	4	4	3	4
ENVIRONMENTAL PRESERVATION SUBTOTAL	8	9	7	7

FIGURE 4-3 COMPARISON OF ALTERNATIVES

Relative rankings 1-5; 5 = highest ranking, 1 = lowest ranking
(Continued)

Criterion	No Project	Alternative 1 Traffic Management	Alternative 2 Phased Transit	Alternative 3 Maximum Transit
QUALITY OF SERVICE				
Visitor Experience	3	4	5	2
Risk	1	3	5	1
Frequency	1	4	3	5
Reliability	2	3	4	3
QUALITY SUBTOTAL	7	14	17	11
OVERALL SCORE	36/85 = 42%	57/85 = 67%	66/85 = 78%	59/85 = 69%

NO PROJECT ALTERNATIVE

The rankings of the No Project Alternative reinforce the assumptions YARTS organizers had eight years ago when they began this process. While the No Project Alternative does avoid building staging areas in the corridors and whatever adverse environmental effects that may entail, this alternative has a strongly negative effect on visitation and visitor experience. Visitation in the region is significantly reduced, resulting in a projected loss of over \$7 million in visitor spending annually.

The No Project Alternative ranks lowest in almost all categories, with these exceptions:

- It requires no direct subsidy from the region. Nevertheless, the losses in visitor spending it creates, plus its drastic reduction of economic growth potential for the region, make it the most costly alternative when measured by its overall impact.
- By reducing the number of cars allowed into the Valley without providing an alternative means of access, it is the most efficient in terms of cost per vehicle removed.
- Because it reduces the overall number of cars in the region, it ranks fairly well environmentally. Increasingly, however, the majority of pollutants produced by automobiles occurs during a "cold start." By building parking at Taft Toe, these cold starts are concentrated in the Valley – an air quality non-attainment area – rather than dispersing them throughout the region.

In sum, the No Project Alternative represents everything the supporters of YARTS have been striving to avoid: reduced public access to Yosemite and a devastating effect on the region's economy.

ALTERNATIVE 1: TRAFFIC MANAGEMENT PLAN

The Traffic Management Plan strives to do one thing, and it does this fairly well: to avoid Park gate closures as efficiently as possible. This alternative therefore ranks very well in terms of Cost per Rider and Boardings per Service Hour. By most other measures, however, it falters.

Because of its extremely complex operations, it will be by far the most difficult alternative to implement. Due to its unpredictable nature, it does not accomplish any of the secondary goals of the other project alternatives, like serving Park employees and the region's residents.

The No Project Alternative dramatically reduces current visitation levels to the Park, with serious damage to tourist dependant local economies.

Moreover, it is not significantly more efficient than the other project alternatives. It requires comparable levels of investment in staging areas and vehicles, even if they are not in use. It also requires similar labor costs, keeping drivers on “standby” and ready to move if and when the Park Service closes the gates to additional day excursion visitors.

ALTERNATIVE 3: MAXIMUM TRANSIT ACCESS

The Maximum Transit Alternative aims to make transit the sole mode of access for the majority of day visitors to Yosemite Valley. In current circumstances, the mandatory mode shifts required by this alternative risk alienating many of the Park’s current auto-oriented users, which could cause a temporary decline in visitation and therefore a decline in economic activity in the gateway communities. While this loss is expected to be only temporary, many of the small businesses in the gateway communities cannot withstand even a relatively short term reduction of any major significance in visitation.

The extremely high cost of this alternative, and the high risk of the investment required for implementation, combined with the draconian Park policies required for implementation, make it unacceptable to YARTS at this time.

RECOMMENDED LOCALLY PREFERRED ALTERNATIVE - PHASED TRANSIT SERVICE

Alternative 2, the Phased Transit Service option is recommended as the locally preferred alternative because it offers the greatest gains for Yosemite visitors and the region’s citizens at the least possible risk. This alternative is described in detail in Chapter 5, which follows. It ranks high in all evaluation areas, and receives the highest scores in the most critical criteria:

- It results in the highest increase in visitor spending
- It requires a low public subsidy
- It offers the highest quality visitor experience
- Finally, and perhaps most importantly, it minimizes overall risk

To be successful, however, this alternative requires the active support of the Park Service and the highest level of cooperation among all the YARTS members. As the Park Service makes its final plans for various aspects of the Valley Implementation Plan, it will be essential that its implementation schedules are at least in part triggered by YARTS’ success.

The selection of a preferred alternative does not preclude ultimately implementing any of the other alternatives, including a no project option. It does send a clear message of preference that focuses the remaining study efforts.

More detailed environmental and economic evaluations of this alternative are already underway. The remainder of this Short and Long Range plan provide implementation guidelines for this alternative. However, if at any time, a significant finding in any subsequent study causes the YARTS policy makers to reconsider this alternative, there is no obligation for implementation. This decision is one important step, but not the final step required for implementation.

CHAPTER 5: THE LOCALLY PREFERRED ALTERNATIVE

The Phased Transit Alternative (Alternative 2) was selected by the YARTS Management Board and their Technical and Citizens Advisory Committee as the locally preferred alternative for YARTS service. The phased approach is consistent with the input received from stakeholders and the public. Key features of this approach include:

- A voluntary system that provides incentives to encourage transit ridership.
- Hours of operation consistent with the needs of visitors and employees.
- An operating period limited at first to peak travel seasons, and, ultimately, to peak and shoulder seasons.
- Service focused initially on existing lodging locations, expanded to staging areas as infrastructure develops.
- A high quality riding experience that will encourage visitors to choose transit.
- Minimized risk by starting small and growing over time.
- Provides a basis for a partnership with the Park Service that will allow continued growth in visitation without increasing auto congestion.

The refined phasing does not follow a fixed timeline for moving from one phase to the next. More advanced phases may never be reached, and are dependant on the success of previous phases. The initial phase "Phase 0" is a very small system which will be refined with input from private sector operators and with the experience of the demonstration project, planned for 1999, and discussed in this chapter. The first phase is numbered "0" rather than "1" to indicate that no or minimal parking infrastructure is added, and that no subsidies are assumed to be available to guarantee the direct cost of operations. Higher levels of service may require both capital and operating subsidies, and may not be able to be implemented unless or until such subsidies are secured. Phase 0 is assumed to begin in 2000, after the experience of the demonstration project is allowed to refine service levels, costs, and ridership expectations.

Ultimately the system may grow to be a substantial transit service, accommodating the majority of day visitors during the busiest travel periods. However, even at full build out, this alternative is not designed to replace all auto travel to Yosemite Valley, but rather to provide a viable and positive alternative to driving.

**The Phased
Transit Service
Alternative
allows balance
between auto
and transit
access modes, to
shift gradually
according to
visitors' own
choices.**

It is entirely possible that different corridors will develop a demand for service at different rates. Because demand may be different in each corridor, it is not necessary that the same level of service be offered throughout the region. The proposed phasing shown on Figure 5-1, simply shows four points in time for a system that begins small, and grows larger as conditions change. Those conditions include access restrictions for auto traffic into the Park, as well as increasing demand for transit service. The triggers for moving from one phase to the next are discussed in Chapters 7 and 8 of this report.

FIGURE 5-1
PHASED TRANSIT SERVICE IMPLEMENTATION PHASING

Phase	Phase Description	Route 140	Route 41	Route 120 West	Route 120 East
Demo¹	Pre-Implementation: authorize initial transit operators in each corridor; no new infrastructure; no public subsidy expected.	Hourly service to lodging areas	Hourly service during peak periods; less frequent other times	2-3 trips per day to lodging, and/or authorize tour operators to act as transit	Improve connections to Tuolumne Meadows and/or authorize current tour operators to act as transit
0	Pre-Implementation: sanction existing/new transit operators; no public subsidy; no new infrastructure	Hourly service to lodging areas		Peak service to Groveland area lodging	Improve connections from Valley to Tuolumne Meadows
1	Introduction of staging areas, additional service to existing lodging	Some staging at existing parking locations		New staging area near 120 Junction	
2*	GMP Implementation: 600 parking spaces removed from Valley. Phase 1 successful	Intercept facility construction in each corridor		Expand in-Park staging facility near 120 Junction; some staging in corridors	
3*	Additional 600 spaces removed and/or visitation increases. Phase 2 successful	Additional staging areas created farther from Valley		Intercept facility construction in corridor	Intercept facility construction in corridor

* These phases depend on National Park Service actions concerning the Valley Implementation Plan and on the success of YARTS Phase 1.

¹Service levels for demonstration project to be determined based on negotiations with private operators. Other service levels to be adjusted following initial demonstration.

The initial phase of YARTS service will not significantly reduce parking demand on the Valley floor. Phases 1 through 3 begin to address potential decreases in available parking spaces.

Phases beyond the initial Phase 0, which is essentially a continued demonstration service, may be reached based on the success of the transit service, regardless of access or parking restrictions in the Park. If YARTS services attract larger than anticipated ridership, service levels will need to be increased to ensure the continuation of a pleasurable experience. If YARTS initial service gets to the point of "passing up" passengers, it will ultimately fail, unless more service can be added quickly. This flexible phasing allows YARTS service levels to be adjusted based both on increasing demand and on any future limitations of auto access to the Park. Again, service may be increased incrementally in smaller "jumps" and/or at different rates in different corridors. The demand for service and the success of previous phases will ultimately dictate the size and speed of growth.

OVERVIEW OF PHASING

The phasing plan calls for YARTS service to begin with a demonstration, or early deployment service, in 1999. That service, described in Working Paper #9, "Demonstration Project Potential," calls for service on all YARTS corridors to be defined in concert with private operators who will be willing to assume the risk for operating a transit service under the "YARTS" logo. While there will likely be no direct subsidy for operations, there are a number of benefits that YARTS can extend to YARTS authorized or "sanctioned" transit operators. These benefits include:

- Eliminating of the \$300 per vehicle entrance fee currently charged to tour buses.
- Discounting Park admission for transit riders to \$3 per person and \$6 per group or less.
- Direct payment for employee fares, either by purchasing passes, or providing a fixed subsidy for all employee trips.
- The ability to "queue jump" using the employee lane at the gate entrance stations.
- Valuable system-wide marketing provided by YARTS including development of a color brochure which would be distributed by the Park and through other important outlets.
- Guaranteed access to the Park for all transit riders.

It is hoped that these incentives will encourage private operators to respond to a request for proposals to be prepared by the YARTS Board during the first quarter of fiscal year 1998-99. The requests for proposal will define minimum service standards in each corridor, but will allow the private sector an opportunity to help define the level and type of service that can be provided in each corridor. YARTS, in concert with the Park, will officially authorize or permit

transit services, which will receive the benefits described above, as well as other incentives developed with the Park. The private operators will work with YARTS to finalize the level of service expected for the summer 1999 demonstration.

It is important that reasonable performance standards be developed to measure the success of the demonstration project. It is not reasonable to assume that a very small starter system will have the same impact that a larger and potentially subsidized system could offer. YARTS will develop standards for performance measurement that are consistent with the service provided. Careful monitoring of the system, and monthly status reports, will enable YARTS to refine the expectations for future phases, particularly the Phase 0 service which will be offered in 2000. That phase, and all subsequent phases are described below.

PHASE 0 - SERVICE WITHOUT STAGING AREAS

Phase 0 can be viewed as a starting point for transit services in the region. This phase follows the 1999 demonstration service, and will be further refined at the conclusion of that project. Phase 0 can be seen as an extension of the demonstration, since it would only slightly refine the service levels, and would not expect either direct operating subsidies or significant additional parking.

Similar to the demonstration project, Phase 0 would provide regular, direct service to lodging along the Highway 140 and Highway 41 gateways, plus peak-only service in the Highway 120 corridors. It would be voluntary for visitors and relies on Park Service policies to eliminate or greatly reduce entrance fees for transit users, and to encourage transit use by employees.

Because of the lack of nearby, large concentrations of lodging in either of the Highway 120 corridors, we do not expect YARTS to be able to provide all-day, unsubsidized service there. The most effective way to increase service to these corridors beyond the peak-only service described in Figure 5-1 will be to pursue two alternative types of service:

- Work with existing tour bus operators to develop transit services that can be authorized along Highway 120. In exchange for the elimination of entrance fees to the Park, plus the marketing of their services as part of YARTS, these private operators may well be willing to act more like transit operators, running on regular schedules and making stops in corridor communities to pick up additional passengers. Some tour operators may opt for a kind of hybrid service, where they pick up a limited number of prepaid "tour" passengers in more distant locations like Reno, and then convert to transit operation as they get closer to the Park.

Phase 0 allows service to be implemented without making a major investment in infrastructure or other capital items.

- Work with the National Park Service to develop a staging area in the Highway 120 Junction/Hazel Green area as soon as possible. This area has the advantage that it can serve both the Highway 120 East and West corridors effectively and efficiently, eliminating large numbers of day-use vehicles from the Valley. Several potential parking areas within or adjacent to the Park have been identified and are currently being reviewed. Service levels on the Highway 120 corridors are dependant on the development of parking in this general area.

Significant staging areas for other day-use visitors in the Highway 140 and 41 corridors are not anticipated during this phase. In the Highway 140 corridor, smaller and seasonal lots may be developed on land owned by the National Park Service. An employee-oriented park-and-ride lot would be especially convenient in this corridor. In the Highway 41 corridor, it may also be possible to develop temporary parking locations. However, these corridors have more available parking associated with lodging and other existing facilities and should require less intercept parking in this phase. Should additional parking be located, it could only serve to strengthen this initial phase.

Service Characteristics and Costs

Phase 0 service will operate daily between June 1 and September 15. Services will run on hourly headways from the communities of Mariposa and Oakhurst to Yosemite Valley. Runs will begin at 6:00 AM. An additional run from El Portal will begin at 5:00 AM to serve the employees residing there. YARTS services will run until 11:00 PM for both gateways. In this phase, for costing and scheduling purposes, we assume that other operators continue to provide the current level of service to both the Merced Amtrak station and the Fresno Airport. Since VIA and the Fresno Airpporter are currently operating these services at a profit, whether or not they become folded into YARTS does not significantly effect YARTS' overall costs or risk.

Weekend service in the peak month of August is expected to require an additional bus providing service between El Portal and the Valley, which would increase the service frequency to every half hour during the morning and afternoon peaks. Sample schedules for the Phase 0 service can be found in Chapter 7 of this report. These schedules represent a "first run" and are provided for reference only.

One bus will be required to serve the Highway 120 West corridor, operating two round-trips in the morning and afternoon. Similarly, one additional bus will be required to supplement service on the Highway 120 East Corridor.

Figure 5-2 summarizes the operational characteristics for the Phase 0 service. A total of 17 vehicles are required to operate this phase in all corridors. The Highway 140 service will require 8 buses on peak days in August (6 operating and 2 spares) and 5 buses on August weekdays and throughout June, July, and September. The Highway 41 service will require

5 buses. Highway 41 does not have the density of lodging that Highway 140 has and most of this lodging lies some distance from the Valley floor. Therefore, it was not deemed necessary to operate half-hour service on this corridor. Should additional service be necessary on peak days when the Park experiences capacity problems, each additional bus on the Highway 41 corridor would create an additional 12.6 daily revenue hours of service at a cost of between \$500 and \$700 per day.

Two cost estimates are used to provide low and high boundaries for costs. The low cost estimate assumes that the total cost for a private operator to provide the service is \$50.00 per revenue hour of service. The upper end cost assumes a cost of \$60.00 per hour of service. This range was estimated based on discussions with charter operators about costs for services. Based on these estimates, total cost for the Phase 0 service will be between \$750,000 and \$910,000 as specified. As with all cost figures presented in this paper, costs are in 1998 dollars and would be escalated to the start of service.

FIGURE 5-2
PHASE 0 – SERVICE CHARACTERISTICS

	Highway 140	Highway 41	Highway 120 West	Highway 120 East	Totals
Days of Operation	June 1 - September 15			While Tioga Pass is open	
Hours of Operation	5:00 AM - 11:00 PM	6:00 AM - 11:00 PM	Min: 2 trips at peak	Min: 2 trips at peak	
Peak Buses (1)	8	5	2	2	17 ³
Total Revenue Hours	6,800	5,400	1,600	1,250	12,400
Total Costs (\$ millions) (2)	\$0.34 - \$0.41	\$0.27 - \$0.32	\$0.08 - \$0.10	\$0.06 - \$0.08	\$0.75 - \$0.91
Daily Bus Trips Into Valley	26	15	4	3	38
Average Base Headway (minutes)	60	60	180	180	60
Average Peak Headway (minutes)	30	60	180	180	60
Total peak bus trips per hour into Valley	2	1	0.25	0.25	3.5
Service to	Mariposa	Oakhurst	Groveland	Tuolumne Meadows	
New parking required	0	0	0	0	0

(1) Includes Spare Vehicles

(2) Operating Cost of \$50-60 per hour assumes vendor-provided vehicles.

(3) Assumes 30 minute peak service to El Portal

Ridership and Fare Revenues

Critical to the success of YARTS is the ability to attract riders to the system. This is especially important in the early stages when the service is expected to operate with no subsidy. For-profit transit services are extremely rare. To attract riders to the system, YARTS must provide a fare that enough people are willing to pay to cover the cost of operations. This interdependence between ridership and fares makes it difficult to estimate revenues.

Ridership was estimated based on the number of employees living along a corridor and the number of lodging units adjacent to that corridor. Assumptions were made about the ability to attract people from their lodging into a transit service on a voluntary basis. It was also assumed that the Park Service and Park Concessionaire would play a significant role in encouraging employees to use the transit system.

Fare Structure

The fare structure in Figure 5-3 is suggested as a starting point for discussions concerning an appropriate fare for the service. These fares do not include the Park entrance fee and it has been assumed in the analysis that the fee will be waived for transit users at least for the first couple of years of YARTS operation. This is desirable to encourage transit use until the transit system matures and a culture of transit access has been achieved.

The Park's policy on entrance fees for transit riders will have a substantial impact on the viability of any transit service.

As Figure 5-3 shows, the proposed fare reduction for groups of three or more gives groups a financial incentive to take YARTS that they would otherwise lack.

A discounted group fare is not without complications. First, a group fare cuts deeply into revenue projections, but in "voluntary" systems group fares also provide a needed incentive for ridership. The revenue and ridership projections in Phases 0 and 1 therefore assume such a group discount. Further, groups of employees will need to be treated differently from groups of visitors, since they pay no entrance fee, and since they will presumably be subject to a broader set of transportation demand management programs. Working Paper #9 discusses a wide range of employee transportation strategies, including providing subsidized or entirely employer paid transit passes. This is seen as a critical recommendation to the success of YARTS.

Secondly, it may be difficult to determine who is indeed a member of a group and who is not. If people line up to buy YARTS tickets at a hotel or staging area, single or two-person travelers in line may offer to split the price difference with others in order to receive the group discount. It may therefore be necessary to limit the group discount to travelers ordering tickets in advance.

FIGURE 5-3
PHASE 0 - SAMPLE ROUND TRIP FARE STRUCTURES FOR
HIGHWAY 140 AND 41 SERVICES

Fare Category	El Portal / Incline	Briceburg / Midpines	Mariposa
Regular Adult Fare	\$7	\$16	\$20
Student/Youth Fare	\$3	\$8	\$10
Children Under 3	Free		
Family Fare (3+ People) Fare per person	\$3	\$8	\$10
Resident or Employee	\$5	\$12	\$15
Monthly Pass (Employee or Resident)	\$50	\$50	\$50
Fare Category	Wawona	Fish Camp	Oakhurst
Regular Adult Fare	\$12	\$16	\$20
Student/Youth Fare	\$6	\$8	\$10
Children Under 3	Free		
Family Fare (3+ People) Fare per Person	\$6	\$8	\$10
Resident or Employee	\$9	\$12	\$15
Monthly Pass (Employee or Resident)	\$50	\$50	\$50

The specific fare structure proposed in Figure 5-3 is not critical to the ridership estimates, nor to the level of service recommended. More critical is the fact that fares are reasonably priced to attract ridership, and that the average fare remain relatively constant to cover the majority of operating costs.

A key feature of the proposed fare structure is the reduced family or group fare. This fare is designed to encourage greater transit use by groups. This is especially important at Yosemite, since the average Park visitor comes in a group of three people. Current Park and transit pricing policies make the perceived cost of driving less than half the cost of taking transit into the Park. The group fare is designed to bring transit costs more in line with the cost of driving, assuming that the Park Service eliminates the Park entrance fee for transit users.

In addition to discounts for groups of three or more people, the fare provides 50% discounts to students and 75% discounts to adult local residents. Monthly passes could be purchased by those showing proof of residence or employment. Additional promotions such as three- or five-day passes for visitors could also be offered to encourage visitors to use the service.

Ridership

Figure 5-4 shows the ridership estimate for this phase at a minimum level of 47,700 assuming that a percentage of visitors from each lodging unit on a corridor can be encouraged to take transit. The percentage varies by type of lodging and by the distance from the Park. Guests staying further away from the Park are less likely to take transit than those staying close to the Park. The concentration of employees in each corridor was also considered. The methodology for determining ridership is described in the Technical Appendix to Working Paper #12 - "Refined Options."

FIGURE 5-4
PHASE 0 – RIDERSHIP AND REVENUE POTENTIAL

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Ridership	16,500 - 34,300	7,200 - 16,100*	24,000		47,700 - 74,400
Fare Revenues (millions)	\$0.22 - \$.41	\$0.16 - \$.32	\$0.052		\$0.43 - \$0.78
Cost per Rider (round trip)	\$10 - \$25	\$17 - \$44	\$6 - \$8		\$2 - \$61
Farebox Recovery	53% - 100%	50% - 100%	50% - 100%		52% - 100%

* Ridership in the Highway 41 corridor may be slightly higher if YARTS succeeds in attracting larger-than-expected numbers of campers.

Although Phase 0 assumes no subsidy, note that farebox recovery may run as low as 50% of the direct operations and maintenance cost in the most pessimistic calculation. This "farebox return" is even lower when all costs, including marketing and administration are considered. While it is possible to run this level of service at a break even point, we cannot guarantee that operators will be able to do so. Operators may well be willing to accept a good deal of risk, or even take an initial loss, to start up a service that is expected to grow. Not all operators, however, may be willing to bid on this full level of service. If YARTS goes out to bid for Phase 0 service, it should allow potential bidders some flexibility as to what level of service they propose in each corridor.

Performance Assessment

Since the goal of YARTS is to maintain visitation levels to the Yosemite region while helping to reduce the impact of motor vehicles in the Valley, one indicator of success for YARTS is how well the service reduces the number of private vehicles entering the Valley floor without diminishing visitation. This indicator is a convenient surrogate for several of the established YARTS goals and objectives. A system that is comfortable, convenient, cost effective and provides value to the visitor is also a system that encourages ridership by people who have

other travel alternatives. It is for this reason that we use this indicator as a measure of potential.

Figure 5-5 shows a variety of indicators that can be used to judge the potential effectiveness of this program. It is expected that on a peak day approximately 256 vehicles will be removed from the Valley floor because their users switched to transit. A more detailed assessment of all phases of the Preferred Alternative can be found in Working Paper #15, "valuation of Alternatives."

FIGURE 5-5
PHASE 0 – PERFORMANCE ASSESSMENT

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Peak Day Vehicles Removed	111	67	78		256
Cost per Vehicle Removed	\$31 - \$37	\$40 - \$47	\$17 - \$20		\$34 - \$41
Boardings per Revenue Hour	4.9 - 10.1	2.7 - 6.0	14		3.9 - 8.3

Since the Phase 0 service is considered a "pre-implementation" service, it should not be expected to generate the ridership necessary to meet the GMP. It should, however, be able to reduce the chances of gate closures on peak days. This service is very cost effective as well. It is anticipated that the average cost per vehicle removed will range between \$34 and \$42 dollars.

It is expected that the service will carry just over 8.3 riders per hour of service provided. This is generally low ridership for a system serving a major attraction, but is reasonable for a start-up service. Over time the ridership base for the service will expand. The number of boardings per hour will be much higher during the peak hours between 8:00 AM and 8:00 PM, but this scenario provides for early morning and late evening service aimed at Park employees, starting at 6:00 AM and ending at 11:00 PM. While these hours of service cost more per passenger to provide, the Park Service may be willing to provide some level of support for this service, directly or indirectly. In addition, offering a wider service span will provide the necessary insurance to attract visitors who might otherwise not use transit for fear of being stranded

Phase 0 is expected to capture between 2% and 12% of the total potential numbers of riders on all four corridors. The approach considers that under a voluntary system most visitors will choose to drive into the Valley floor. It does, however, assume that up to 33% of all employees working in the Valley who live in these gateways will take transit into the Park, as a result of a strong demand management program, to be implemented by the Park and its concessionaire.

PHASE 1: INITIATE DAY-USE STAGING

Introduction

Phase 1 has two goals, the first goal being to prevent gate closures on peak visitation days. Services will be structured to capture visitors exceeding the GMP maximum of 6,017 daily vehicles. Based on growth estimates, the number of vehicles headed for the Valley in excess of the GMP maximum could rise beyond 3,000 vehicles on peak days by the year 2000. This year is the earliest time that Phase 1 services could be implemented.

The second goal is to test YARTS' ability to attract day-use visitors in addition to gateway overnight guests to the system. Phase 1 will require additional parking to accommodate those day-visitors who wish to use transit to enter the Park. Both the 140 and 41 corridors can use existing locations to park cars. Tenaya Lodge in Fish Camp has offered some of its spaces for day-use parking. There are other locations at hotels in El Portal and some existing lots that can be quickly converted for day-use parking. These lots will have to have basic signage and perhaps a kiosk to sell tickets for day-visitors.

In order to attract day-visitors, the following things need to happen:

- The total cost to enter the Park on transit must be competitive with the cost to drive.
- YARTS needs to engage in a focused and pervasive marketing effort to inform users of the existence of staging areas, using YATI, the Park Service and a cooperative regional marketing program.
- On peak days drivers must be alerted to gate closures by YATI and advised of the closest staging area location.
- Services must be reliable and provide a high level of schedule adherence.
- The service must offer comfortable and convenient amenities not just on buses, but also in staging areas.

Using specific timeframes for phasing makes the analysis much easier, but does not imply that a rigid phasing schedule needs to be maintained. When implementing Phase 1 service and all future phases, it should be remembered that each additional stop slows the bus and may ultimately require additional vehicles and drivers, or may make the trip too slow to be desirable. Furthermore, promotion and marketing will require a great and continuous effort on the part of YARTS. Promoting the service is one of the most important roles for YARTS since information is key to attracting users. The day visitor must be aware that a transit option exists, that it runs when they need it, and they need to know where to access it. Furthermore, on peak days YATI needs to be upgraded to report impending gate closures and to alert motorists to staging locations.

Finally, Phase 1 is designed to incorporate service provided by private operators and to minimize subsidies. Subsidies may need to be provided to purchase vehicles and/or to supplement service that would be offered through "sanctioned" private operators.

Service Characteristics and Costs

Figure 5-6 presents the basic operating characteristics of Phase 1 service. This service will start earlier in the season than the Phase 0 service, beginning in mid-May. The hours of operation will be similar to the hours provided in Phase 0 with earlier service in the morning to accommodate Park employees. Frequencies listed in the table may not be maintained to the end points of every corridor's service. For example, in the Highway 140 corridor, service to El Portal may be more frequent than service provided to Mariposa, the assumed end point for this phase. It should also be noted that other services, including those making regional connections at Amtrak and airports will continue to operate, although they are not specifically discussed in the tables.

FIGURE 5-6
PHASE 1 – SERVICE CHARACTERISTICS

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Days of Operation	May 15 - September 15				
Hours of Operation	5:00 AM - 11:00 PM	6:00 AM - 11:00 PM	7:00 AM - 11:00 PM		
Peak Buses ¹	9	8	16		33
Total Revenue Hours	7,910	7,900	12,200		28,010
O&M Costs (\$ million) ²	\$0.40-\$0.47	\$0.39-\$0.47	\$0.61 - \$0.73		\$1.4-\$1.67
Daily Bus Trips Into Valley	33	24	67		124
Average Headway into Valley (minutes)	30	40	30		30
Bus trips per hour	2	1.5	4		7.5
New parking spaces required	140	200	400		740
Regular service to . . .	Mariposa	Oakhurst	Highway 120 Junction area with some additional trips to Groveland & Tuolumne Meadows		

(1) Includes Spare Vehicles.

(2) O&M of \$50-60 per hour assumes vendor-provided vehicles. Does not include administrative and marketing costs.

Altogether, 33 buses will be needed to operate this service if it is begun around 2002. Note that service in the 120 corridors is more frequent than in the other corridors, since both these corridors are served by a single, large staging area in the vicinity of the 120 junction inside the Park.

On the Highway 140 corridor, parking spaces for approximately 140 cars will be needed on peak days. It is preferable that in the earlier implementation stages these spaces be provided in El Portal. This capacity will be needed for the half-hourly service offered between El Portal and the Valley during Phase 1. On Highway 41, slightly more parking spaces – around 200 – will be needed on peak days, due to the larger number of day-users coming through this corridor. For all staging areas, it is better to have fewer larger lots than many smaller ones because bus speeds slow down with each additional stop.

Operating costs for this phase will run between \$1.4 million and \$1.7 million per season. This cost increase is due to the extended days of operation from 107 days to 124 days and the additional service to handle peak day volumes.

Ridership and Revenues

Figure 5-7 provides ridership projections and estimated fare revenues by gateway. It is estimated that up to about 120,000 annual passengers will be carried by YARTS during this phase. The proposed fare structure is consistent with the assumptions discussed in Phase 0.

FIGURE 5-7
PHASE 1 – RIDERSHIP AND REVENUE POTENTIAL

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Ridership	24,200 - 42,800	12,700 - 28,900	36,000 - 50,000		72,900 - 121,700
Fare Revenues (<i>millions</i>)	\$0.30 - \$0.47	\$0.22 - \$0.47	\$0.35 - 0.73		\$0.87 - \$1.67
Cost per Rider (<i>round trip</i>)	\$9 - \$19	\$13 - \$37	\$12 - \$20		\$13 - \$31
Farebox Recovery	63% - 100%	47% - 100%	48 - 100%		49% - 100%

Phase 1 revenues could exceed \$1.6 million depending on ridership levels. At the high end these revenues will cover the costs of the service, at the low-end they will cover around 50% of the direct service costs. Complete cost recovery depends on the ability of YARTS to attract day-visitors to transit. Should subsidy be required for Phase 1 it would amount to between \$440,000 to \$850,000 per season, simply to cover the direct costs of operation. Potential subsidy requirements are discussed in more detail in Chapter 11 of this report.

Performance Assessment

As in Phase 0, the potential success of Phase 1 service depends in large part on the ability of YARTS to reduce the number of vehicles accessing the Valley floor. On a peak day, YARTS can be expected to remove over 1,000 daily vehicle entrances from the Park shown in Figure 5-8. By the time that the Park Service begins implementing the GMP, YARTS, through a voluntary use system, can potentially eliminate from the Valley floor over one-third of the vehicles in excess of the GMP maximums.

Even if subsidized, the cost per vehicle removed is extremely low, ranging from about \$13.00 to just under \$16 per car eliminated from the Valley floor. On peak days the proposed system should be able to remove over 1,000 daily vehicles from the Valley floor.

These reductions assume a very low market penetration for YARTS services. Approximately 8% of the total estimated market is assumed to take YARTS during Phase 1. This is on par with the Phase 0 penetration. The potential market for this analysis includes gateway lodgers, day-use visitors, and Park Service employees. This conservative estimate underestimates local residents who may choose to use the system for intra-regional travel.

FIGURE 5-8
PHASE 1 – PERFORMANCE ASSESSMENT

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Peak Day Vehicles Removed	241	275	485		1001
Cost per Vehicle Removed	\$15 - \$18	\$13 - \$16	\$12 - \$14		\$13 - \$16
Boardings per Revenue Hour	6.1 - 10.8	3.2 - 7.3	2.9 - 4.1		3.7 - 6.9

PHASES 2 AND 3 - GENERAL MANAGEMENT PLAN IMPLEMENTATION

Phases 2 and 3 are unlikely to be reached during the next five years. These are considered the Long Range Plan options for YARTS and are discussed in more general terms.

Phase 2 will have been reached when YARTS demand or Park General Management Plan implementation require the construction of additional day-use staging outside of the Valley floor. As in Phase 1, this analysis assumes growth in visitation since the Park Service has not established a new "people capacity" for Yosemite. Prior to implementation of each new phase, Park visitation and YARTS ridership needs to be closely monitored in order to refine the estimates.

Phase 2 will have been reached when new intercept facilities are introduced to the gateways. In the initial YARTS study it was assumed that the trigger for Phase 2 would be the implementation of the GMP with an immediate reduction in Valley floor parking. Given substantial YARTS and Park Service progress since that time and the public input from the VIP process, we believe that the timeline presented in the first study may not occur as soon as indicated previously.

YARTS may also assert more influence on travel behavior than previously thought. If the demonstration project and Phase 0 implementation prove financially feasible, YARTS may be able to begin the development of more intercept facilities without the implementation of the GMP. Another possible future is that the Park Service will implement VIP land use changes scaled in proportion to the success of YARTS. Under this scenario, no intercept parking will be constructed within the next several years. The third outcome is that the VIP will be implemented in large part as it was presented in the first YARTS study and intercept facility development will be needed at some point after 2002.

The last outcome will be assumed for this analysis. As in the initial study, it is anticipated that the Park Service will eliminate approximately 10% of its parking capacity in the Valley as this phase is entered. This represents around 600 vehicles that YARTS has to absorb on peak days. This reduction is coupled with a projected increase in visitation. As discussed earlier, the linear growth projection is but one possible future for the Park. It is recognized that regional growth and visitation may accelerate or decline between now and 2002. As implementation of Phase 2 nears, these estimates should be refined based on current YARTS ridership.

Phase 3 represents an additional 600 space reduction in Valley floor parking which YARTS will have to absorb. For analysis purposes this reduction is assumed to occur no sooner than 2005.

Service Characteristics and Costs

Figures 5-9 and 5-10 show the operating characteristics for this service in Phases 2 and 3. The service will operate on 15 minute to 40 minute headways depending on the season and time of day. As with the Phase 1 services the hours of operation will be from 5:00 AM to 11:00 PM every day of the week. Phase 2 service will operate from May 15 until September 25 and will require 125 peak buses at an annual operating cost of approximately \$6.9 million per year for 124,500 revenue hours of service. YARTS is expected to purchase vehicles by Phase 2 which will result in a total capital cost of approximately \$51 million in current dollars for this phase.

The destinations shown on Figures 5-9 and 5-10 show the assumed "end point" for the service at this phase. Service frequencies need not be consistent throughout the route, and likely, more service will be provided to locations closer to the Valley than to the end points on the routes.

FIGURE 5-9
PHASE 2 – SERVICE CHARACTERISTICS

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Days of Operation	May 15 - September 25				
Hours of Operation	5:00 AM - 11:00 PM	6:00 AM - 11:00 PM	7:00 AM - 11:00 PM		
Peak Buses (1)	30	40	34	21	125
Total Revenue Hours	35,500	36,600	31,800	20,600	124,500
Annual O&M Costs (\$ million) (2)	\$1.95	\$2.01	\$1.75	\$1.13	\$6.85
Total Capital Costs (\$ million)	\$16.5	\$21.0	\$16.4	\$11.1	\$65.0
Average headway (minutes)	15	15	20	20	12
Bus trips per hour	4	4	3	3	14
Regular service to	Mariposa	Oakhurst	Groveland	120 Junction	
Total Parking spaces required	970	1120	2057		4150

(1) Includes Spare Vehicles

(2) O&M costs of \$50-\$60 per hour. Does not include administrative and marketing costs.

FIGURE 5-10
PHASE 3 – SERVICE CHARACTERISTICS

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Days of Operation	May 1 - September 25				
Hours of Operation	5:00 AM - 11:00 PM	6:00 AM - 11:00 PM	7:00 AM - 11:00 PM		
Peak Buses (1)	59	62	75	21	217
Total Revenue Hours	68,000	70,900	84,400	25,400	248,700
Annual O&M (2)	\$3.74	\$3.90	\$4.64	\$1.40	\$13.68
Total Capital Costs	\$14.0	\$11.5	\$19.1	\$2.3	\$46.9
Average Headway (minutes)	5-10	5-10	5	5	6.0
Bus trips per hour	6-12	6-12	12	12	36 - 48
Regular service to . . .	Merced	Fresno	Groveland	Lee Vining	
Total Parking spaces required	1400	1616	2967		6000

(1) Includes Spare Vehicles

(2) O&M costs of \$50-\$60/hour. Does not include administrative and marketing costs.

The Phase 3 service will operate at much higher frequencies to absorb the additional demand generated by visitor growth and reductions in Valley floor parking. A total of 217 buses may be needed for this operation that includes a capital cost of nearly \$90 million. Some savings may be possible if YARTS can arrange to share vehicles with services that "peak" in the winter months, when YARTS ridership would be low. Additional capital will be required to develop significant staging areas in each corridor, as total parking demand reaches 6,000 spaces, region-wide. (Note: This figure includes the cost of Phase 2 buses. The increase in capital costs is \$37 million over Phase 2.) Annual operating costs for Phase 3 will rise to nearly \$14 million for 250,000 annual revenue hours of service.

Costs for Phase 2 and 3 are higher in this study than in the initial YARTS study because visitation to the Park is assumed to continue while in the first study it was constrained to 10,530 people per day. In addition, the timeframe for implementation has been moved back by approximately two years which further increases costs. Finally, costs have been calculated in current, 1998 dollars in this analysis while the last study calculated costs in 1994 dollars.

Ridership and Revenues

Expected ridership and revenue potential estimates for Phase 2 and 3 are presented in Figures 5-11 through 5-12. The ridership estimates account for a loss of approximately 5% in visitation due to Valley parking reductions, approximately 5%. As parking is reduced in the Valley, some visitors residing in the region will find it preferable to make day-trips to other regional attractions. Others will shift to non-Valley destinations in the Park where auto access remains unrestricted. However, any decrease in visitation demand to the Valley caused by motor vehicle access restrictions will be overcome by continued overall growth in visitation demand. That is, even if cars are restricted in the Valley, visitation will continue to grow as long as YARTS provides a reasonable access alternative.

FIGURE 5-11
PHASE 2 – RIDERSHIP AND REVENUE POTENTIAL

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Ridership	197,400	227,800	197,400	216,100	838,700
Fare Revenues (<i>millions</i>)	\$2.99	\$3.95	\$2.45	\$1.94	\$12.07
Average Cost per Rider (<i>round trip</i>)	\$16.01	\$15.50	\$15.59	\$9.26	\$14.04
Farebox Recovery	95%	112%	79%	97%	96%

FIGURE 5-12
PHASE 3 - RIDERSHIP AND REVENUE POTENTIAL

	Highway 140	Highway 41	Highway 120W	Highway 120E	Totals
Ridership	337,700	389,700	337,700	356,400	1,421,500
Fare Revenues (<i>millions</i>)	\$5.64	\$7.54	\$5.24	\$3.21	\$21.63
Average Cost per Rider (<i>round trip</i>)	\$17.57	\$15.90	\$21.78	\$6.36	\$15.30
Farebox Recovery	95%	122%	71%	142%	99%

The Phase 2 and Phase 3 services could completely cover their direct operating costs in fares. Additional costs, such as marketing and managing the service are not included, and are discussed in Chapter 11.

CHAPTER 6: POLICIES CRITICAL TO YARTS' SUCCESS

Before YARTS begins planning its service implementation, its constituent agencies need to formally adopt a set of policies that will support its success. These policies are divided into two sections outlined below.

- Policies with National Park Service responsibility
- Policies with YARTS Board and local jurisdiction responsibility

All these policies need to be committed to as soon as possible, and certainly before RFPs for service are issued. Implementation can happen later, but without these key commitments, implementing YARTS service will be too risky for all parties concerned, and transit operators will not be willing to bid on providing service at reasonable rates.

To be successful, moreover, YARTS should be based on two overriding service design principles:

Principle 1: The YARTS system must maximize rider convenience by:

- Minimizing transit travel times and costs
- Minimizing the need to transfer
- Maximizing incentives for transit use

Principle 2: The YARTS system must create a seamless network from gateway to Valley floor, maximizing the efficiency of both the YARTS and Park shuttle systems. This includes:

- Minimizing total system cost
- Providing comprehensive YARTS information and marketing materials throughout the region
- Establishing Park employee programs that support vehicle reduction goals.

These principles should be reflected in the policies adopted by each of the responsible agencies. The following sections describe the policy responsibilities of each agency.

POLICIES THAT NPS SHOULD ADOPT

To be attractive to visitors, the YARTS system must be designed for maximum convenience and reliability. While both the Park Service and the gateway communities bear responsibility for developing appropriate supportive policies, this section focuses on the actions of the Park Service, as they are integrally related to YARTS.

For YARTS to function effectively, the National Park Service must adopt the following policies in support of YARTS:

1. **YARTS passengers must be guaranteed access to the Park.** This basic requirement must be honored whether or not there is ultimately any type of reservation system in place in Yosemite National Park. This policy requires that any visitor arriving via transit will be admitted to the Park, with or without reservation. The Park Service has already endorsed this policy.
2. **YARTS passengers should be able to travel on YARTS buses to the "primary node", which is currently the Visitors Center at the east end of the Valley.** Requiring a transfer to reach the center of activity would add travel time and create a disincentive for transit use. YARTS passengers should be given the advantage of direct service to the primary activity center. The Park Service has already endorsed this policy.
3. **Taking YARTS passengers to the primary node does not necessarily eliminate the need for a transfer facility, further west in the valley.** A transfer facility may be useful for the following reasons:
 - a. Allow for the option to capture buses that are not operating in "transit mode" (using "stop, drop and go" operations within the Valley) before they enter the populated parts of the Valley.
 - b. Provide a transfer opportunity for YARTS riders with destinations outside of the Valley. This location would allow YARTS passengers to transfer between corridor routes, as well as transferring to visit locations within the Park but outside the Valley.
 - c. Provide a break room facility for bus drivers, eliminating the need for them to sit in idling vehicles.
4. **The transfer between YARTS and Intra-Park shuttles should be as seamless as possible.** Seamless transfers are defined in several ways. These include:

The National Park has the ability to adopt and implement policies that will determine the viability of the YARTS system. Key areas include gate pricing, employee transportation, and circulation policies within the Park.

- a. Minimizing the need for multiple transfers wherever possible.
 - b. Comfort and capacity should be matched on all systems where transfers are required.
 - c. Schedules should be coordinated for timed connections where headways are similar.
 - d. The transfer point should include amenities and points of interest that would make it a destination in itself. Eventually, this west Valley transfer point could take over some of the functions now provided at the Visitor's Center, forming a new point of interest within the Park.
 - e. A critical connection will exist between the YARTS buses and the internal Valley shuttle, since many YARTS riders will also use the shuttle for circulation within the Valley. YARTS service cannot be developed faster than the capacity on the internal shuttle, or YARTS passengers would overwhelm shuttle capacity. The additional demand for shuttle service created by passengers accessing the Park by transit should be considered in Park planning.
 - f. Circulation for YARTS buses and an increased shuttle fleet must be considered carefully by the Park Service. The proposed circulation system, which leaves only Southside Drive open to transit traffic, and converts Northside Drive to bicycle and pedestrian use may be inadequate for the combined requirements of shuttle and YARTS buses, and the other vehicles that will continue to access the Park by car. Additional study of alternative circulation systems is recommended.
 - g. YARTS vehicles will naturally serve other important non-Valley destinations inside the Park, en route to the Valley. This should allow the Park to rethink its own internal bus network to coordinate with YARTS services.
5. **Transit vehicles should be given the highest priority inside the Park.** Transit vehicles must have opportunities to get around bottlenecks, including the use of technological solutions and physical improvements at entrance gates.
 6. **Staging areas should become an extension of the 'Yosemite Experience.'** Visitors' trips must begin in the gateway where they arrange for their transportation into Yosemite and begin the final leg of their trip into the Park. This includes the opportunity to pay Park entrance fees with bus fares and may include opportunities for education and information stations at staging areas.
 7. **YARTS information should be readily available throughout the Park.** The YARTS system should be fully integrated with other visitor services within the Park. Information should be readily provided by the concessionaire and other employees to ensure that visitors are fully aware of their options for accessing Yosemite.

8. **Establish pricing policies favoring transit.** Economic incentives may include both reductions in cost for transit riders and increases tied to auto use. The goal is to make the cost of entering Yosemite Valley for a family of four on transit no more costly than the perceived cost of driving.
9. **The YARTS service must be attractive in its own right, encouraging use by providing high quality amenities.** This includes developing quality bus shelters and clear signage in the Park.
10. **Establish employee transportation policies that encourage transit use.** Specific policies and incentives for employees should be developed and coordinated with the Housing Plan being completed by the National Park Service. The following are key components the Park Service should commit to in creating a comprehensive commute program. Working Paper #8, "Employee Transportation Demand Management," provides more detail on each of these topics.
 - a. The Park should create an employee transportation demand management program that includes both Park and concessionaire employees. There are many examples of successful programs involving federal agencies.
 - b. YARTS may ultimately be the most efficient way to get employees to work. Where there are concentrations of employees, in areas such as El Portal, transit may be the most efficient commute alternative. While the preferred alternative provides only a seasonal service, a lower level of service, focused on employees, may be retained year round using the VIA Connection or additional YARTS carriers.
 - c. Demand for YARTS will be high if employees are offered a transit "flash pass." This allows employees unlimited rides by showing their employee ID. Of course, employee trips must be paid for by someone, and these arrangements are generally subsidized by the employer. The net expense for transit passes may be minimal, as parking areas for employees can be reduced when there is a greater use of alternative modes.
 - d. If YARTS is not fully implemented, the Park should develop a strong shuttle and vanpooling program of its own. A comprehensive and year round commute assistance program will use YARTS as only one element of the overall plan. Other alternatives include carpool and vanpool matching, as well as subscription buses aimed at employees.
 - e. The Park should determine the cost for maintaining employee parking and should make the costs visible to employees. Pricing programs are often the most effective means of reducing employee parking demand. Many employees would be surprised

to know how much land in the Valley is devoted to employee parking, as well as the cost of maintaining that parking. If typical, it costs the Park approximately \$1,000 per year for each employee parking space, including some value for the land underneath it. The Park should calibrate that cost and make it visible, either through pricing programs, parking cash-outs or other means.

- f. About 14.8 acres of the Valley floor are currently dedicated to employee parking. The Park should explore the possibility of moving most employee cars out of the Valley, either through a commute assistance program, or through fiat. Many employers require their employees to park in the farthest available locations, leaving prime parking spaces for customers. As parking in the Valley is decreased, a priority should be placed on moving employee parking out of prime Valley areas, to more remote lots.
 - g. The Park should explore a variety of creative programs aimed at reducing employees' need to drive, as well as their need to store a car in the Valley. Car sharing programs are one example of a program that would allow employees to save money and forgo auto ownership altogether without reducing their mobility.
11. **Accept and implement the YARTS definition of Transit Service.** This definition is discussed in the next section. It should be adopted by both the YARTS board and the NPS who will implement it in partnership beginning in 1999.

In his April 15, 1998, memo, Yosemite National Park Superintendent Stanley Albright formally agreed to points 1 and 2 of this list. This memo and other communications from the Park Service suggest they are actively working towards the others. Again, it is critical to YARTS' success that the remaining policies be adopted and implemented as soon as possible.

POLICIES OF GATEWAY COMMUNITIES AND YARTS BOARD

The following chart summarizes a large set of policies that the YARTS Board needs to formally adopt to ensure YARTS success. The Board "accepted" these policy recommendations as part of Working Paper 3, but it has yet to adopt them. Committing to them in a stronger way will help to settle controversies that may arise in the future, and may help to attract more transit service providers to bid for service at a lower rate.

As YARTS forms a Joint Powers Authority, the distinction between policies that can be adopted and implemented by YARTS independent of an action of the member jurisdictions will be clarified. Because those lines have not yet been drawn, the following policies remain in both the purview of YARTS and the local agencies that comprise it.

Transit Service Definition

One of the most important policies the full YARTS Board – and the Park Service individually – needs to implement is the definition of a “transit service.” At its April, 1998, meeting, the Management Board approved the following definition:

Transit services, unlike tour buses, make routine scheduled stops whether or not there are passengers to be carried. They operate as “stop, drop and go” services, rather than waiting for passengers to complete their visit to a site and then to return to the bus. Unlike tour buses, transit buses do not require parking infrastructure for “stacking” at various locations, except for a single layover or terminal. Transit buses do not sit and idle for significant periods of time. Transit buses would possess all required licenses, including Regular Route Authority as permitted by the PUC.

**YARTS and the
NPS will work in
partnership to
officially
authorize transit
service
providers to
begin operation
in 1999.**

In addition to the operational characteristics describing transit service, authorized transit operators would be required to meet certain criteria ensuring their continued operations. These are described below:

- Possesses all required licenses including PUC permit for transit operation.
- Provides proof of insurance at levels required by the NPS.
- Provides a trained professional driver force, and maintains a high level of monitoring of the driver fleet.
- Provides quality vehicles that meet CHP inspections and that offer a high level of comfort and amenities.
- Demonstrates the financial and reporting capability to allow for direct billing of employee trips, monthly accounting for gate entrances, and other required reporting. Demonstrates financial capability to maintain service throughout the demonstration season, regardless of ridership.

Operational characteristics include:

- Operating scheduled service on a daily basis (as scheduled) regardless of the number of passengers
- Accepts walk-on passengers at designated stops
- Operates as a “stop, drop and go” service, without lengthy idling, except as needed to maintain schedule
- Offers a set fare schedule which will include honoring monthly passes and pre-paid passes or direct billing for all passengers
- Supports YARTS marketing efforts, including the use of a YARTS logo to convey the image of an integrated system

LOCATION OF PARKING FACILITIES

YARTS is not expected to assume land use planning responsibilities from local jurisdictions. Nonetheless, it will be important for YARTS to work closely with local jurisdictions to define the location and size of intercept parking locations. YARTS cost estimates have assumed to provide service to a relatively compact service area. Policies related to the selection of intercept parking facilities that have been accepted by YARTS and forwarded to local jurisdictions are included in Chapter 7 under the section titled “Years 3-4: Initiate Staging for Day Visitors.”

YARTS Service Standards

The YARTS Board is expected to control the minimum service standards that must be maintained by authorized transit operators during the early years of YARTS service. These standards will cover all aspects of transit operations. Some of the most important decisions that the Board will make in the coming quarter include:

- Service Level** - The minimum service level for each corridor must be established, so that private operators know how much service is expected to operate in each corridor. The Board will also face a related decision - whether to authorize only one operator in each corridor, or whether to accept multiple operators if required to reach minimum service requirements. Elements included under the general category of “service level” are frequencies (how often the bus operates),

The YARTS Board will control important decisions regarding minimum service standards and will monitor services to ensure that quality is maintained.

service span (the daily hours of operation), service period (the calendar period in which YARTS will operate), and extent (the outer limits of YARTS coverage).

- b. **Fares**- The public input suggests that cost will be a primary factor driving acceptance of the YARTS system. While the Park will set policies related to gate entry fees for transit riders, and is encouraged to set those fees as low as possible, the YARTS Board will need to adopt a sample fare structure for private operators to determine whether the YARTS service is "worth the risk" in its early years.
- c. **Vehicle Size and Quality** - Another key area for YARTS policy decision will be defining what is an acceptable transit vehicle. Because the initial service will be operated by private operators using their own fleets, the Board needs to define minimum standards for vehicles that will ensure the type of experience the public will accept, without limiting the field of potential bidders so much that no service is provided.
- d. **Service Standards** - The YARTS Board must develop service standards that are reasonable for the level of service and the "maturity" of the YARTS system. Service standards include performance standards for the operators providing service. YARTS may discontinue the "transit permit" of private operators that fail to consistently meet performance requirements. Additional standards will be required for system performance, and will impact the service levels anticipated in future years.

Figure 6-1 summarizes policies already accepted by the YARTS Board that will assist in future decision making.

FIGURE 6-1
SUMMARY OF NECESSARY YARTS AND LOCAL
GOVERNMENT POLICIES

Policy Area	Policy Recommendation
Geographic Limits	YARTS service should be designed to be as compact as possible, given limitations on available parking and potential for parking expansion. Parking locations closer to the Park should be preferred over more distant sites.
	Geographic limits will be set for the system based on geographic equity and the need to control costs.
	Individual corridors may "expand" the limits of YARTS by providing funding for the incremental costs to extend the system beyond what is required to serve parking areas. By allowing more distant communities to "buy in" to the YARTS system, an equitable distribution of service and costs can be maintained, along with the flexibility required to maintain local control. The primary YARTS system could also be supplemented by a network of private shuttles feed the main YARTS routes.
Service Levels	YARTS will begins as a seasonal service, expanding service span over time as demand requires. The initial service will operate from early June through mid-September.
	Service levels will be based on demand in each corridor which will result in different levels of service in different areas.
	The system will be costed based on a service span of 8 AM to 8 PM, supplemented by runs focused on employee schedules that may be subsidized by the Park in various ways.
Incentive Policies	A pricing policy should be adopted which encourages transit use, by making transit access to the Park, including transit fares and entrance fees less costly than the perceived cost of driving.
	Other incentives should be developed in concert with the Park Service to make transit as attractive as possible to the broadest possible market.
Phasing Policies	An initial "early deployment" or "demonstration" phase is planned for 1999 utilizing private operators with conventional equipment. Operators meeting standards will be authorized or "sanctioned" by YARTS and will be marketed and afforded certain incentives that other operators do not receive.
	Transit riders on transit buses will be allowed access to the Park at all times.
	All YARTS phases will involve a combination of public and private investment.
	YARTS will increase service incrementally based on the incentives offered to transit riders, the amount of parking available and the demand for service.
	The Phased Alternative will not replace auto access to Yosemite in any phase of implementation.
Transit Definition	Any operator that provides "stop, drop and go" service on regular schedules and participates in YARTS fare agreements can be a YARTS provider. See more detail above.

CHAPTER 7: YARTS SHORT RANGE TRANSIT ACTION PLAN

The following plan outlines action steps YARTS will need to take in the coming years to develop a successful transit system. The plan is most detailed in the first year, and becomes less detailed as the years proceed. Until the demonstration program is complete and analyzed, and until key decisions are made regarding the construction of staging areas and the implementation of the General Management Plan, it is impossible to make sound predictions as to when YARTS will be able to expand to what level of service. Instead of presenting time lines, therefore, this plan attempts to describe key triggers and decisions that will be necessary to move YARTS along from one phase to the next.

As a way of demonstrating the interrelationships between tasks, a fold-out table at the end of this chapter provides a rough time-line including responsibilities. (See Figure 7-5)

YEAR 1 (1998-99): PREPARATIONS

From summer 1998 through summer 1999 YARTS will be transformed from a planning agency, drawn together by a loose agreement, to one that is ready to implement and oversee service. The current Memorandum of Understanding will be revisited, with the goal of creating a Joint Powers Agency that can be a blueprint for the future of this organization. Final details for the implementation of service will be developed, moving from the concepts accepted during Phase 2 to actual service on the street in the summer of 1999. This Phase includes the opportunity to measure the performance of the demonstration service, and to fine tune this Short- and Long-Range Plan for future implementation.

The first year of the Short Range Plan focuses on the transition from a planning agency to an operating entity.

This “organizational crossroads” leads to several important issues which need to be resolved:

- The recommendation from Phase 2 to form a Joint Powers Authority must be realized. Allowing member jurisdictions to review and recommit themselves to the YARTS goals will bring new life to the process, while strengthening the organization and protecting the member jurisdictions from future liability.
- Environmental clearance of the demonstration program must be completed prior to implementation. In addition, following the recommendation of the Phase 2 study, a programmatic EIR is needed on the overall YARTS plan. This will allow

for tiered EIR documents to be prepared for any intercept parking or related transit facility sited in the future.

- The demonstration program must be finalized, implemented and monitored. The results of this early deployment service must be used to finalize implementation details for other phases of service, including triggers for moving from one phase to another. This is a crucial step, since it is possible for the four corridors to grow at different rates, with more than one type of service in place at any one time. Other implementation issues, ranging from supportive policies to vehicle specifications, need to be further detailed.
- A key element is the marketing plan and materials for YARTS. Education is a critical component of the YARTS service. While the economists predict that there is a large untapped market for visitation to Yosemite, it is important that current visitors be guided through the process, so that current visitors are not lost as new markets are developed. The goal is to maintain a stable visitor base and build from there. Marketing materials will range from brochures to YATI improvements, all tied to the YARTS service and goals.
- A business plan must accompany the service plans. This links organizational requirements, financing and service needs.

Once the planning tasks are accomplished, YARTS will be poised to become an operating agency. This phase of study includes the implementation and evaluation of the demonstration or early deployment service, scheduled for operation in 1999. This initial implementation is critical, because it will set the tone for the future of YARTS. A successful demonstration, accompanied by positive media and good "word of mouth" will get YARTS off to a positive start. On the other hand, a poorly implemented service, accompanied by confusion and poor service quality may doom YARTS to the "perpetual drawing board", and will increase the chances of further access restrictions in the Valley.

The demonstration service provides a laboratory environment for evaluation and adjustment of the short range transit plan. By identifying lessons learned from the demonstration, YARTS can ensure a continually improving quality of service and can fulfill its mission to provide a positive alternative to the automobile in the Yosemite region.

As the system moves towards implementation, the roles and responsibilities of local government and the National Park Service become elevated. Despite the potential formation of a more formal joint powers agency, it will fall to local governments to develop land use plans that support YARTS parking and facility needs, and to develop policies that support the use of transit. From the Park's perspective, there are a variety of issues to be resolved, ranging

from internal circulation and interface between shuttle and YARTS systems, to sanctioning of transit services to employee transportation policies.

The following section outlines in detail each of the tasks that will need to be completed from now through service start-up in summer 1999.

Tasks Before Service Begins

1. Establish a strong organization

The Phase 2 study recommended the formation of a Task Force to negotiate the particulars of a Joint Powers Agreement to formalize the YARTS organization. This task includes the facilitation of this task force, development of a negotiated agreement, and shepherding the agreement through the labyrinth of agencies that will need to approve it.

Once an agreement has been reached, it will need to be approved by each of the member agencies.

It is the intent of this task to have a completed agreement in place before May 1999.

1.1 Develop the Joint Powers Agreement

The joint powers agreement is a legal document formalizing the YARTS organization as a Joint Powers Authority. The agreement provides an opportunity for re-visiting the goals of the organization. In addition, the JPA agreement must resolve a variety of issues including:

- Identify member agencies and board composition
- Define decision making authority
- Establish regular committees, and advisory committees
- Define methods for adding new members and for terminating the agreement
- Identify funding sources and an equitable distribution of costs, including in-kind contributions
- Define staffing needs and how the agency will select and retain staff
- Establish operating policies such as conflict of interest, financial disclosure, etc.

Once an agreement is drafted and reviewed by staff and the Management Board's ad hoc committee, it will need to be reviewed by local legal counsels for each jurisdiction.

1.2 Finalize Operating Policies

Some aspects of the JPA operation need not be spelled out in the actual agreement, but should be documented in operating policies. This task would define those policies and would draft them for approval of the JPA board. Examples could include contracting policies, opportunities for public involvement (in addition to Brown Act requirements), terms for advisory committee membership, etc.

Each of these policies would be carefully documented in an operating manual, which would be prepared for the new Joint Powers Board.

2. Finalize Demonstration Program

The demonstration, or early deployment service, is now on the critical path for YARTS. To be ready for the summer of 1999, a number of key decisions must be made relatively quickly. Key among these are:

- Define the minimum level of service for each corridor
- Set the entrance fees for transit arrivals into the Park
- Establish the employee incentives that will create a market among employees
- Establish other incentives that may broaden the market among visitors
- Establish a marketing plan that will get the "biggest bang for the buck"

This task will address each of these items in time to prepare the Request for Proposals that will finalize the services that can be offered in 1999. A tentative schedule for these decisions is shown in Figure 7-1.

It will be critical to have strong on-site supervision during the demonstration period, including someone to work directly with the Park, local jurisdictions and private operators to ensure that the service is being operated as promised, and to provide on-site quality control. With this level of attention, adjustments can be made in the field to ensure the success of this project.

2.1 Define Demonstration Service Plan

A number of key decisions outlined on Figure 7-1 will help to determine the minimum levels of service to be requested in the RFPs for transit operators for the 1999 summer season. This is a critical path task, because marketing and information campaigns can not begin until vendors have been selected and service schedules finalized.

YARTS will need to determine a minimum level of service for each of the corridors. Assuming that no subsidies are available for the 1999 season, the service levels will be designed to offer the most frequent service that can be reasonably provided without direct subsidy. The exact

level of service will be dependant on key decisions by the Park Service and local jurisdictions, including:

- **Employee incentives** – Subsidizing all or part of the fares of employees, for example, would increase the market in some corridors substantially.
- **Entrance fees for transit riders** – While the Park currently has the authority to lower entrance fees for transit riders to \$3 per person, \$6 per group, we have asked the Park to consider eliminating entrance fees for the demonstration period. This would allow private vendors the maximum flexibility in defining service.
- **Parking locations** –While the demonstration project does not envision any parking construction, existing facilities, such as fairgrounds and schools could be utilized to increase the amount of parking available. Parking in and adjacent to the Park is especially important, particularly for the 120 East corridor. The current demonstration program design assumes that 120 East would be served by additional trips from Tuolumne Meadows.
- **Other incentives** –Tying transit service to other discounts, including bike rentals, and food discounts, similar to the coupons a Golden Eagle pass purchaser receives would be one type of incentive to riders. Developing value added packages such as lodging + transit combinations would also increase the market for transit and could raise the minimum service levels.

In addition to identifying the minimum required service level, several other standards must also be set:

- **Amenities** – Since there is no direct subsidy expected at this time, it may not be possible to have every element in place for 1999. However, it is critical that the service be perceived positively, requiring that reasonable standards be developed for service amenities, signage, vehicles, etc.
- **Performance measures** – It is important that this initial level of service not be “burdened” with the higher standards that would be expected of a fully mature, larger system. By scaling the expectations for the service to the level of service provided, we increase the opportunity for success.

FIGURE 7-1
YARTS DECISION MATRIX FOR SERVICE START-UP: SPRING 1998 - SPRING 1999

QUARTER	Consultant Deliverable	YARTS Staff Action	YARTS Board Decision	Local Government Decision	National Park Service Decision	Other
3rd Quarter 1998 Jul-Aug-Sep	Phase III work scope begins Finalize marketing plan for demonstration service RFP for Initial Service Develop evaluation criteria Begin marketing program	Prepare for YATI upgrades	Finalize service specifications for 1999 service as input to the RFP. Complete draft of JPA agreement	Local governments endorse YARTS plan Identify any temporary sites that may be available for parking during 1999 demonstration service. Provide input into service levels needed for 1999 service.	Finalize routing within Park for initial service. Establish terminal facility for YARTS vehicles.	Local chambers and businesses are encouraged to suggest potential parking areas.
4th Quarter 1998 Oct-Nov-Dec	Peer review of RFP Vendor conference and RFP distribution Vehicle RFP if funds are available (for future phases)	Identify potential service vendors Initiate YATI upgrades as needed	Finalize logo and other system identification	JPA Agreement approved	Begin marketing program at YNP.	
1st Quarter 1999 Jan-Feb-Mar	Prepare brochures for initial service Complete Program EIR and define needed mitigation measures.	Vendor interviews	Vendor selection	Identify initial sites for intercept parking (if any)	Participate in vendor selection	
2nd Quarter 1999 Apr-May-Jun	Conduct training for National Park Service and concessionaire	Implement major media program for YARTS service				

- **Other opportunities** – Are there “value added” opportunities to improve the quality and attractiveness of service? For example, the Yosemite Restoration Trust has indicated an interest in developing a volunteer guide program, which would put knowledgeable guides on board transit buses to provide enhanced education and interpretive information. Identifying opportunities to add value to the service will enhance opportunities for success.

2.2 Develop Requests for Proposals

The Requests for Proposals developed for the demonstration project need to be designed to be a bit different than typical proposal requests. In this case, we are asking private vendors to respond to a minimum set of service standards and tell YARTS:

- ✓ Whether they will meet the minimum standards, or exceed those standards in any area.

Areas that will be open to individual response include:

- **Coverage** – vendors will be invited to respond in all four corridors, but may choose to offer service in only one, or any combination of areas.
- **Frequency of service** – minimum standards will be set, but vendors may suggest more frequent service.
- ✓ **Price** – Maximum prices will be suggested in the RFP; vendors may include their own pricing alternatives.
- ✓ **Amenities**– Quality of vehicles and other amenities offered by the provider will be open to proposal.

It is important that the RFP include some non-negotiable terms that all providers will be required to meet. Vendors will need to show insurance coverage, will need to meet PUC permit requirements, and will need to demonstrate the financial capability to complete the demonstration service, even if ridership is less than projected.

2.3 Select Demonstration Program Vendors

Based on a review of the applications received, a committee appointed by the Board should recommend one or more vendors in each corridor. Prior to finalizing recommendations, the staff should complete a background check of each applicant and contact references. It is critical that the recommended vendors be committed to performing their proposed service throughout the demonstration period, and to working with YARTS and the Park Service to adjust service as needed during the demonstration period.

2.4 Develop Marketing Materials and Campaign

One of the principal benefits offered to prospective transit operators is the joint marketing efforts that will provide information about the demonstration service. With so much at stake, it is critical that YARTS develop high quality, clear marketing materials that can be distributed well in advance of the demonstration service. Information must be made available through a variety of media including the Internet (including YATI), international travel and tour companies, Yosemite National Park mailings, visitor centers and local lodging locations.

A comprehensive marketing campaign will need to provide collateral marketing materials, including a color brochure. The brochure should provide information about connections from major cities and from other modes, as well as local YARTS transit services. The brochure should be modified later in the project to reflect the 2000 service.

Staff should make necessary modifications to the YATI website, and recommend changes to the YATI kiosk to highlight this information. Other possibilities include a transportation hotline phone number, and real time information, such as changeable message signs.

Identifying and marketing to key target groups is especially important given the short time available to market the demonstration service prior to implementation. Economic analysis will be useful to identify those markets most likely to use the YARTS service and those that could have the most positive impact to the region. For example, "green tourists" are a growing market who would be especially tolerant of a fledgling service. Markets for the demonstration service will be specified, as will markets for the first five years of YARTS. For more detail, see Chapter 10.

3. Refine Plans and Implementation Strategies

Further refinement of this plan will be required as YARTS moves closer to implementation. Refinement will come from a variety of practical sources:

- Key decisions still need to be made by the National Park Service, reacting to a number of YARTS recommendations. These include basic policy decisions regarding routing and stop locations within the Park, employee transportation policies, fares etc. These decisions will have direct impacts on the YARTS plan.
- Another essential decision is the method and extent of auto access limitations that could be imposed on visitors to the National Park. YARTS service would need to be substantially adjusted if auto access is significantly restricted, or if a day use reservation system is implemented.
- The environmental work, described in Task 4, may uncover unanticipated problems or require adjustments to the plan based on environmental impacts.

- The availability of intercept parking in a particular corridor could impact the speed at which service is developed. It is possible that one or more corridors may be able to implement intercept parking sooner than originally predicted, and this could influence service levels.
- Information gathered from the year-round data base about who is using Yosemite and how they may be impacted by alternatives should be considered carefully in finalizing the plan.
- Input from the early deployment or demonstration project service could impact the scope and schedule of future phases.
- Developments in alternative fuels and other types of vehicle technologies could influence the specifications for vehicles used for YARTS service.

To ensure that visitors are not unduly inconvenienced, these decisions should be made no less than 18 months prior to implementation.

There are numerous uncertainties that could change the service plan. Policies need to be updated as decisions are made. The financial, capital and business plans all will need to be updated in an iterative fashion, to ensure that the next year of service is planned very realistically. Variables still to be considered for out-years should be fully discussed, including an identification of who is responsible for decisions and where they lie on the critical path. It is important that key policy decisions be made well in advance so that service decisions can be made and the system can be appropriately marketed, especially in foreign markets where travel decisions are often made many months in advance.

A key element of this task is the preparation of a critical path schedule, identifying responsibilities for all critical actions. This will heighten awareness of the relationship between local decisions and the regional plan. The schedule should be updated regularly as decisions progressed.

The following subtasks should also be completed:

3.1 Finalize Supportive Policies

The policies recommended in Chapter 6, "Policies Critical to YARTS' Success," are imperative to the scope and schedule of YARTS implementation. Policies include:

- Routing within the Park, including terminal and stop locations
- Pricing for transit riders and other types of visitors
- Employee transportation policies

- Seamlessness of transfers to other transportation services within the Park
- Incentives within the Park, such as discounts and amenities for transit riders

While work to date has assumed that many of these decisions would be in place prior to the 1999 demonstration process, it is clear that decisions need to be made well in advance of service delivery. These decisions dramatically affect the viability of service, and would clearly influence the attractiveness of service to bidders and to potential riders.

Staff should continue to work closely with Park management to recommend policies that support YARTS service and implementation strategies that would most support a successful implementation. The impact of these policies on YARTS viability and service levels would be brought to the Board as part of the service refinement process.

3.2 Auto Access Policies and Their Relationship to YARTS

The preferred YARTS alternative assumes that there will be no short term reductions in the number of autos that can access the National Park. Should the Park service choose to further restrict auto access, YARTS service may need to be altered in response. To ensure that visitors are not unduly inconvenienced, these decisions should be made **no less than 18 months** prior to implementation. This allows time to adjust the YARTS service levels and contract with vendors who are capable of providing required service, as well as marketing for the desired results.

This is not a recommendation for auto constraints. Rather, it suggests that the YARTS team needs to work closely with the Park Service to ensure that decisions will be made in a timely manner and in a way that allows YARTS to respond to Park Service policy changes.

The study team will work closely with NPS management and the YARTS board to improve communication on these issues, and to identify the impacts of various alternatives. This information will feed directly into the refinement of alternatives.

3.3 Vehicle and Facility Plans

Earlier working papers identified vehicle and facility needs for each phase of implementation. As service plans are refined, the number of parking spaces needed in each corridor will need to be adjusted and the number of vehicles refined.

The specific staging area locations selected by local jurisdictions will have a major influence on the cost, and ultimately the viability of YARTS service. While local jurisdictions have land use planning control regarding the siting of staging areas, they cannot assume the financial viability of YARTS services depends heavily on siting staging areas as close to the Park as possible, especially in the earlier phases. For more detail about staging areas, see "Years 3-4" below.

Vehicle needs must also be updated, including an investigation of alternative fueled vehicles. It is possible that by the time public funds are required to purchase vehicles, electric fuel cell and dual fueled electric vehicles may have progressed to the point of being available for an application of this type. Staff should investigate alternatives and will make recommendations for the short term, prior to public ownership of vehicles, and for the longer term, assuming public funds do become available.

3.4 Update this Short Range Plan

This Short Range Plan will need to be updated to take into consideration all of the issues outlined above. The update is expected to include new information gathered from all of the sources listed above and will include:

- **Service levels**, including service span, days of operation, and service frequencies in each corridor by year, expected for the next five years.
- **Stop locations**, both inside the Park and in each jurisdiction. Stop locations are a critical determinant of travel times and cost. The plan should identify intercept parking locations as determined by each jurisdiction, their capacity and amenities. Other significant stops will also need to be identified. Within the Park, both parking and other stop locations should be identified, and used in the printed schedules. Signage will need to be established at all stop locations.
- **Bus Schedules** should be developed showing point to point running times between key time points.
- **Phasing** must be refined based on the projections of ridership and parking capacity, combined with policy decisions made by the Park. The preliminary phases identified in the current study should be re-evaluated, allowing for service to grow with the market in each corridor. Triggers from moving from one phase to another should be more fully documented.
- **Ridership Estimates** should be developed for the revised service levels. Revised phasing will affect capacity and ridership.
- **Vehicle Needs** should be fully developed, including the number required for each phase, the size and type of vehicles, availability of alternative fuel technology, and amenity needs.

The Short Range Plan will need to be updated with information from a variety of sources, responding to policy decisions and operating realities.

All assumptions should be fully documented, to allow for revision if circumstances change. Assumptions should include those related to policies, amenities, and auto access at the Park,

as well as the formation of the YARTS JPA, and the actions required of YARTS, the Park and local jurisdictions.

Impacts should also be fully documented, including the environmental and economic impacts of the revised plan.

4. Complete Required Environmental Clearance for YARTS Plan

The focus here should be to move very quickly from simply clearing the Early Deployment Plan to developing a Program EIR for the YARTS plan in its entirety. The initial study for this document has already been done, and specifically defines which type of document is required. Additionally, a Negative Declaration will need to be prepared for the Demonstration or Early Deployment project.

4.1 Prepare Negative Declaration

The initial demonstration project is expected to be offered over a short period of time, using no new parking facilities and operating a very low level of service. Our environmental consultant concluded that this can be cleared using a Negative Declaration. The Negative Declaration should be thoroughly prepared at this stage. If at any time a higher level of clearance for this project is indicated, the study team will need to prepare the alternate document.

4.2 Programmatic Environmental Impact Report

Environmental work for future YARTS service should begin in Year 1. The environmental study is expected to be a Programmatic EIR. The need for a federal environmental document (EIS) is currently being evaluated and would be done concurrently. The same topics would be covered in both types of documents which will be completed simultaneously. Specific elements are expected to include:

- Air Quality, within the Park and region-wide
- Noise Impacts, both within the Park and in the surrounding communities.
- Biology, including impact on habitats.
- Water Quality, including the impacts of roadway runoff.
- Geotechnical/Hazardous Materials
- Traffic and Transportation and Parking
- Socioeconomic/Growth Inducement, both construction related, and on-going impacts.
- Visual/Aesthetics
- Cultural Resources

Environmental regulations also require a public involvement process. This will be coordinated with other public involvement opportunities, so as not to overburden the communities with meetings.

5. Conduct Public Involvement Campaign

Public participation has been a hallmark of the YARTS process. This high level of public involvement should continue, without over burdening the public with meetings that are not meaningful to them. YARTS should provide as much information and interaction through a range of interactive media, including mail, phone and online means of contact.

6. Prepare to Develop Staging Areas

It is not too early to begin the planning and environmental work for staging areas for future phases of YARTS. Planning, design, environmental work and construction for staging areas may take up to a full year – and in some cases longer. It will be important to have staging areas complete well before YARTS prepares to move to its next phase.

YEAR 2 (1999-2000): DEMONSTRATION SERVICE AND EVALUATION

In many ways, operating a well planned transit service is simpler than actually planning it. From the summer of 1999 through the spring of 2000, YARTS has essentially four tasks:

1. Manage Demonstration Service

A successful demonstration is the key to YARTS' future. If the demonstration service is perceived as a failure in any way, it is unlikely that the YARTS Management Board will be willing to move beyond this initial service. More important, a failure would destroy the interest in providing transit service on the part of private vendors, who are central to the YARTS concept.

2. Evaluate Demonstration Service

Within 45 days of the completion of the demonstration project, the YARTS team should complete a comprehensive evaluation of the service. This will include a detailed performance evaluation based on the criteria developed for the demonstration service. More important than the actual quantitative evaluation will be a summary of "lessons learned" that can be applied to the Short

The focus of the second year is on the management and assessment of the demonstration service. Initial parking lot development will also occur.

Range Plan. We expect that this laboratory experience will have a major influence on the future service.

3. Prepare for Year 2000 Service

The end of Phase 3 of the YARTS study coincides with the development of the details for the Year 2000 service. Informed by the demonstration project and other planning efforts, the Year 2000 service is expected to build on the successes of the early deployment effort, making adjustments as needed based on funding, operating conditions, demand for service, and other factors previously discussed.

Sub-tasks under this heading are very similar to those to be performed for the demonstration service. In preparation for the Year 2000 service, YARTS should:

- Develop reasonable service standards and performance indicators for the Year 2000 service, based on the performance of the early deployment service and on reasonable expectations for a service of this size and type.
- Update the marketing plan and prepare Year 2000 marketing material. One of the key requirements of this task is that marketing material be available well in advance of the service period.
- Prepare the Request for Proposal for Year 2000 service levels. The RFPs should be informed by the demonstration project experience.
- Continue to work toward developing staging areas that will be needed in the next phase, keeping in mind that environmental work, planning, design and construction may take up to two years per site.

4. Begin Implementation of Intercept Parking

As was discussed under the first year's action plan, intercept parking facilities will require several years to develop prior to implementation. YARTS and the local jurisdictions should be looking towards the Phase 1 service level parking requirements and completing design, environmental clearance and construction of the most appropriate sites. This work must continue throughout the first several years of YARTS service to ensure that service levels can increase as demand grows.

Figure 7-2 summarizes the tasks and responsibilities at this stage:

FIGURE 7-2
YARTS DECISION MATRIX FOR YEAR 2: SUMMER 1999 - SPRING 2000

QUARTER	Consultant Deliverable	YARTS Staff Action	YARTS Board Decision	Local Government Decision	National Park Service Decision	Other
3rd Quarter 1999 Jul-Aug-Sep	Collect information on initial service and analyze data.	Update YATI information and issue press materials as service is implemented. Review vendors monthly management reports and summarize for YARTS Board	Approve monthly management reports on YARTS service.	Local/regional marketing efforts. Continue site identification, environmental clearance, design and construction of parking facilities.	Implement employee policies to encourage YARTS ridership along with service implementation. Continue development of in-Park parking locations.	BEGIN SERVICE
4th Quarter 1999 Oct-Nov-Dec	Prepare evaluation of initial service and recommend changes for coming year		Determine service levels and service span for Year 2000 service.		Evaluate revenue changes resulting from pricing policies.	
1st Quarter 2000 Jan-Feb-Mar	Prepare brochures for Year 2 service	Vendor interviews	Vendor selection.	Continue to identify sites for intercept future parking.	Participate in vendor selection	
2nd Quarter 2000 Apr-May-Jun	Conduct second round of training for Park Service and concessioner	Implement second major media program for YARTS service				

SAMPLE SERVICE AREA FOR PHASE 0 SERVICES

As part of the Refined Options Working Paper, sample schedules were developed for Phase 0 of YARTS operation. These schedules will be refined over the next several months. A map showing the proposed demonstration service area is shown in Figure 7-3.

YEARS 3-4: INITIATE DAY-USE STAGING

The most significant difference between the demonstration – or Phase 0 – service and Phase 1 service is the availability of staging areas. In Years 3 and 4, we assume YARTS will still operate by contract through private vendors, but service will be expanded to make use of various staging areas in the corridors. It is not expected, however, that frequencies will increase at this point to more than every half-hour unless demand grows to a level where additional vehicles are put into service. The actual level of service provided in each corridor will depend on demand and on the availability of staging areas to accommodate day visitors in each community.

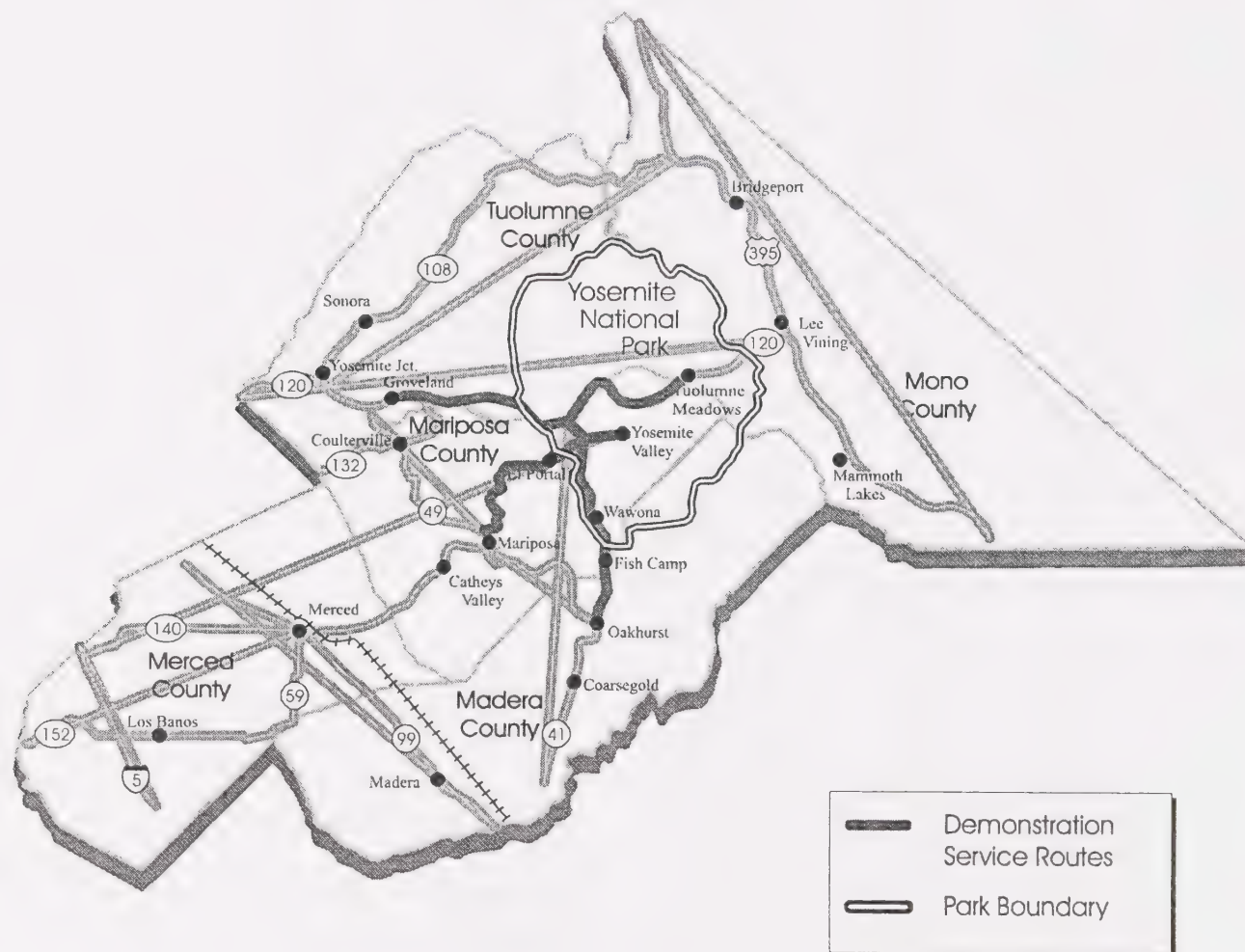
The Phase 1 scenario described in Working Paper #15, "Evaluation of Alternatives," working paper attempts to assign an equal amount of parking as reasonably close as possible to the Park in each of the four corridors. In actual implementation, however, YARTS may never look anything like the Phase 1 scenario described. Some corridors may develop staging sooner than others. Some corridors may be able to develop more parking closer in, allowing for more YARTS service at a lower price. Others may develop staging farther out, requiring less frequent service or additional subsidies to YARTS. The specific timeframes for phasing used in previous papers made comparisons possible, but they do not imply that any rigid phasing schedule needs to be maintained. Each corridor will have the opportunity to set the schedule most appropriate to their communities.

In the later part of the Short Range Action Plan, intercept parking facilities become available, allowing service levels to increase.

Similar to the Phase 0 demonstration, Phase 1 should operate according to some basic principles:

- Routes should be as short as possible, so that greater frequency can be provided at lower cost.
- While flag stops may be appropriate in some locations, it should be remembered that each additional stop slows the bus and may ultimately require additional vehicles and drivers, or may make the trip too slow to be desirable. This tends to be a problem in the longer-term as ridership builds.

FIGURE 7-3
DEMONSTRATION SERVICE PROPOSED MAP
(Subject to Revision)



- Promotion and marketing will require a great and continuous effort on the part of YARTS. Promoting the service is one of the most important roles for YARTS since information is key to attracting users. The day visitor must be aware that a transit option exists, that it runs when they need it, and how and where to access it. Furthermore, on peak days YATI needs to be upgraded to report impending gate closures and to alert motorists to staging locations.
- Phase 1, like Phase 0, is designed to incorporate service provided by private operators and to minimize subsidies. Subsidies may need to be provided to purchase vehicles and/or to supplement service that would be offered through "sanctioned" private operators.

This service plan will need to be refined as it becomes clearer when, where and at what capacity staging areas will be built. To help guide the corridors in locating and constructing staging areas, it is critical for YARTS to adopt a set of standards.

Preferably, the staging areas should be located near basic amenities. Staging at existing hotels or in public parks can provide restrooms for visitors, as well as areas to rest while waiting for the bus. If basic utilities such as power, phone, water and sewer are not available in the immediate vicinity of a staging area location, bringing utilities to the site can easily double or triple the project budget.

While the use of intercept parking facilities is described in this section, it is critical to remember that it may take a full year – or sometimes more – to do environmental work, planning, design and construction of staging areas. The process to begin creating staging areas should begin immediately and should be completed well in advance of changes to YARTS service levels.

Additional criteria are summarized in Figure 7-4. For more detail, see Working Paper #7: "Intercept Parking Design Guidelines & Inventory."

FIGURE 7-4
MINIMUM AND DESIRABLE STANDARDS FOR PARKING FACILITIES

CRITERIA	STANDARDS	
	Desirable	Minimum/Maximum
1. Distance From Valley Floor	≤20 miles	≤70 miles ⁽¹⁾
2. Walk Access to YARTS Service	direct	≤500 feet
3. Number of Parking Spaces	≥300 spaces	≥100 spaces ⁽²⁾
4. Environmental Sensitivity (Visibility)	visible from road	some visibility
5. Information	interactive, real-time	route & schedule
6. Amenities	all amenities of a typical rest area	telephones, shelter
7. Access to Community and Services	≤500 feet	--
8. Infrastructure Cost for Parking Facilities	no cost	some cost
9. Operating Subsidy for Parking Facilities	no cost	some cost
10. Expendability	500 add'l. spaces	200 add'l. spaces ⁽²⁾
11. Site Grade	flat grade (0-2%)	grade of less than 6%
12. Multi-Use	multiple functions desirable	YARTS service only

1 Excepting multi-modal connections which may be longer.

2 Does not apply to lodging locations or existing facilities.

The YARTS board and study team has not yet evaluated or endorsed any specific staging area site at this phase of the study. Furthermore, it should be recognized that the issue of intercept parking may be a sensitive issue and that such facilities may not be required. The study team should help any jurisdiction that requests it in evaluating and screening potential staging locations should this be necessary.

- 1. Distance from Park Valley Entrance: Less than 20 miles is desirable; less than 70 miles is acceptable.** Because the cost of operating the YARTS system is greatly affected by travel time, the proximity of a lot to the Park entrance is a basic consideration. Lots which are too far from the Valley or from the main highway corridor will not be cost-effective. Seventy miles is suggested as a maximum service because this represents an approximate two hour trip to Yosemite Valley.

An important exception to the mileage requirement is for multi-modal connectivity. Parking facilities that also provide connectivity to rail, air or other modes should not be

subject to this distance maximum requirement as long as the connection is made as close to the Park as possible.

2. **Access to YARTS Route: Direct access is desirable; within 500 feet from roadway is acceptable.** As a general rule, park-and-ride lots should be adjacent to the main roads serving the Park. Locating facilities on the main route increase user convenience and makes it easier for buses to enter and exit the lot quickly. Five hundred feet (500 feet) is recommended as the maximum distance YARTS buses should deviate from the roadway. No parking spaces should be greater than one-quarter mile (1,320 feet) of a YARTS bus stop. YARTS access to any stop away from the highway must be designed to minimize bus operating time, and must not require a bus to "double back".

Where possible, large or major stops should be located in view of hotel/motel lobbies, allowing passengers to wait inside as long as possible. It will not be possible to offer "lobby service" to every motel along a route. Where several motels are adjacent, a single stop should be made to serve all of them rather than stopping multiple times in a very short distance.

3. **Number of Spaces: At least 300 spaces (± 2 acres) are desirable; at least 100 spaces (± 1 acre) are acceptable.** Because signing, safety and practicality are important issues in operating a useful YARTS service, the ability to serve riders at different points must exist. If a lot is too small and away from other facilities, the lot will not generate high ridership at that location. This standard does not apply for lodging locations or other existing facilities along the corridor.

In the later phases of YARTS (should these be reached) when larger numbers of cars need to be accommodated, having a series of smaller lots will increase facilities costs and may require larger numbers of vehicles to serve these facilities. Multiple stops at different facilities increases the average travel time for users accessing the Park.

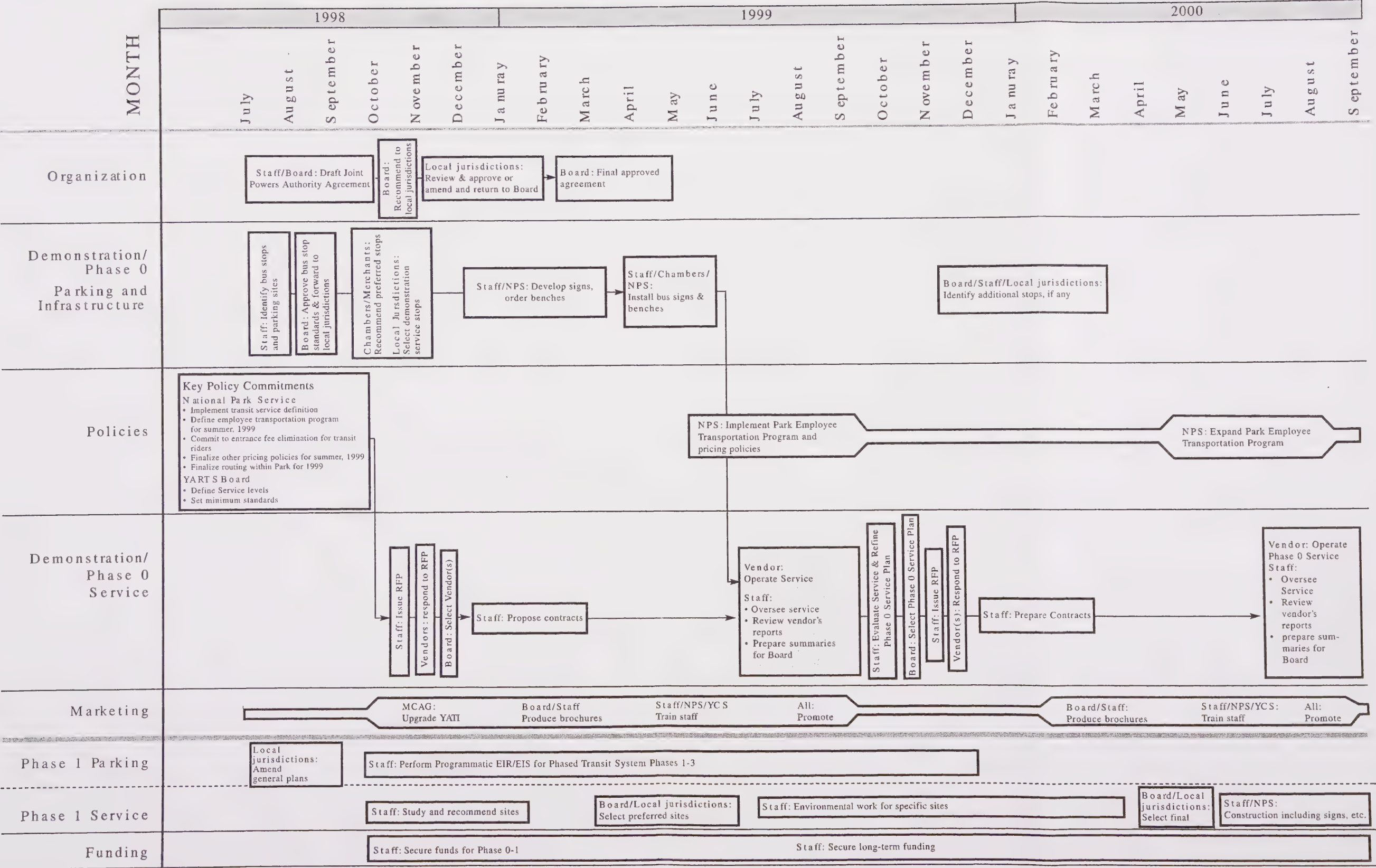
4. **Environmental Sensitivity: Partial roadway visibility and natural setting are desirable; some visibility and natural setting is acceptable.** Another consideration for local jurisdictions to consider is the visibility of a lot from the main highway. In urban areas, the visibility of a park-and-ride facility is a primary way that many users learn about the existence of such a service. This may also be true in the Yosemite region as visitors passing the facility may choose to use transit on this trip or in future travel to the region.

Burglary and vandalism can be discouraged if lots are visible, lighted, and patrolled regularly by local law enforcement. However, lot visibility must be balanced with the aesthetic concern to establish parking areas which capture the nature-like setting of the National Park.

Finally, park-like qualities at the staging facility are helpful to enhance the waiting experience and especially to provide play space for children.

5. **Information:** Interactive, real-time information is desirable; minimum of fixed directional and schedule information are acceptable. Good signage and information is fundamental to a lot's success. As new information systems become available provisions to incorporate them should also be made. YATI kiosks should be widely available and placed in all significant intercept locations. Larger facilities may have "mini-stations" for rangers, ticket purchases or information on gateway activities and services. Full advantage should be taken of technology, including YATI for real-time schedules, reserving seats, etc.
6. **Amenities:** Complete facilities, such as those normally found in highway rest areas are desirable; communications and shelter facilities are minimally acceptable. Amenities such as restrooms, water fountains, concessions and information booths can serve a security and convenience function. In some cases, it may also help to recover the lot's operations cost. At a minimum, telephones and a transit shelter are essential for visitors.
7. **Proximity to Gateway Community Activity and Support Services:** Within 500 feet desirable; no minimum requirement. Park-and-ride lots associated with gateway community activity provides a synergy of land uses. Especially with retail, restaurant and motel services, such a location strategy can generate business activity for the community, as well as offer added diversions for the Park visitor. Local activity also provides a sense of security and deters vandalism.
8. **Capital Cost per Space:** no cost is desirable; some costs are acceptable should funding become available and location is strategic to YARTS. Parking lots may involve some capital costs. Lots should ideally be constructed with funds provided from private parties or other sources, some resources may need to be mobilized by YARTS. Should YARTS funding be required, a higher level of scrutiny of the lot's usefulness should occur. Local jurisdictions are encouraged to explore shared-use parking with other non-conflicting seasonal uses, such as school parking facilities. Private businesses may be interested in offering expanded parking on-site to attract day visitors to their businesses.
9. **Operating Subsidy per Space:** no cost is desirable; some costs may be acceptable if lot location is strategic to YARTS. Although operations costs are typically low, some costs for cleaning, maintenance, outdoor lighting and other items will be incurred. Private sources to provide for funding these improvements are preferable, but a source of subsidizing the site is needed if YARTS is to be the operator of the lot.
10. **Expendability:** Expendability to over 500 spaces is desirable; expendability to over 200 spaces is acceptable. As the YARTS system grows, so will the demand for parking spaces. Site selection should include an assessment of expansion opportunities. Building a smaller lot and expanding it later offers a short-term cost savings, as well as the potential to provide for more vehicles in the future. Transit service would not have to be significantly altered to serve existing facilities, but schedule and route changes may have to be made to serve new facilities at other locations.

11. **Site Grade: flat site is desirable (0-2%); grade of less than six percent is acceptable.** A flat site will be easier and less costly to grade and construct a parking area on than hilly terrain. Generally, autos are parked on a slope of less than two percent from front to back to assure that the car will not roll out of the parking space. More severe grades are found perpendicular to the vehicle (such as in a number of parking garages); a grade of up to five percent is acceptable if the grade is perpendicular to the parking spaces. An average grade of six percent can generally be graded to conform with the above constraints with landscaped parkways between aisles. Grades higher than six percent would typically require more extensive site grading to level out the different parking aisles and may need some form of retaining walls that would increase the cost of the parking site.
12. **Potential for multi-use for the parking facility: multiple functions desirable; parking for YARTS service only acceptable.** Facilities that are multi-functional, such as a multi-modal facility or a joint use facility with a picnic area or park, an IMAX theater, educational facilities, restaurant or retail outlet can provide an additional basis for attracting riders to the YARTS transit service. A combined rail terminal and parking facility for YARTS service could provide a higher frequency of service than for just one function or the other. The multi-modal use could reinforce non-auto trips via one mode for access to the region and YARTS for local access to Yosemite. Similarly, joint use facilities offer additional reasons to stop at the facility and after visiting the joint use attraction, use YARTS to continue their trip into Yosemite.



CHAPTER 8: LONG RANGE PLAN

The premise of the Phased Transit Alternative selected by the YARTS Management Board in May, 1998, is that YARTS service slowly expands from one phase to the next based on the proven success of a given phase. Working Paper #15, "Evaluation of Alternatives," assumes that Phase 2 will have been reached when YARTS demand or Park General Management Plan implementation require the construction of additional day-use staging outside of the Valley floor. As in Phase 1, we assume continued growth in visitation since the Park Service has not established a new limit on the number of people (as opposed to cars) that the Valley can accommodate. Prior to implementation of each new phase, however, Park visitation and YARTS ridership will need to be closely monitored in order to refine the estimates.

In the initial YARTS study it was assumed that the trigger for Phase 2 would be the implementation of the GMP with an immediate reduction in Valley floor parking. Given substantial YARTS and Park Service planning progress since that time and the public input from the VIP process, we believe that the time line presented in the first study may not occur as soon as indicated previously.

YARTS may also assert more influence on travel behavior than previously thought. If the demonstration project and Phase 1 prove successful, YARTS may be able to begin the development of more intercept facilities without the implementation of the GMP. Another possible future is that the Park Service will implement VIP land use changes scaled in proportion to the success of YARTS. Under this scenario, no additional intercept parking will be constructed within the next several years.

A third possible outcome is that the VIP will be implemented in large part as it was presented in the first YARTS study and additional intercept facility development will be needed around 2002. In the initial study, it was anticipated that the Park Service will eliminate approximately 10% of its parking capacity in the Valley as this phase is entered. This represents around 600 vehicles that YARTS would have to absorb on peak days. This reduction is coupled with a projected increase in visitation. As discussed earlier along with our other assumptions, the linear growth projection is but one possible future for the Park. It is recognized that regional growth and visitation may accelerate or decline in the future. As implementation of Phase 2 nears, these estimates should be refined based on current YARTS ridership.

The Phase 3 service assumes an additional 600 space reduction in Valley floor parking, as described in the GMP. If such a reduction happens at all, we assume it will occur no sooner than 2005.

In addition to pursuing implementation of more developed YARTS bus phases, rail service may become a viable option in at least some of the access corridors. The YARTS board has

expressed an interest in studying rail feasibility as a long term option for access to Yosemite. The viability of rail service may be enhanced by the implementation of high speed rail from the San Francisco Bay area and the Los Angeles area into the Yosemite region.

As service expands, the YARTS Management Board will be faced with several important questions:

To what extent should service levels be equal in each of the corridors?

While the ultimate ridership potential is almost exactly the same in each of the four corridors, some corridors may choose to be more aggressive in developing staging areas and promoting YARTS. In the 120 East corridor, furthermore, all of the close-in staging area sites are outside the corridor's control. It is possible that some corridors are ready to move to a next phase while others are not. The study team will need to make a set of recommendations to the Management Board for how to handle such a scenario before it happens.

What is the role of cities such as Fresno, Merced, Oakdale, Lee Vining and Mammoth Lakes?

These outlying communities have been among the most enthusiastic supporters of YARTS, and have abundant flat land ideally suited to staging areas. Moreover, these communities offer multimodal connections to regional bus, air and rail, and residents of the Valley and smaller gateway communities have expressed a desire to have YARTS service for shopping and entertainment trips. Unfortunately, their distance from the Valley makes frequent YARTS service to them expensive and time-consuming. Will such communities be willing to provide some subsidy to YARTS to encourage more service earlier? Will the YARTS Board's political and economic development goals support service there despite the high cost?

What is the role of Fresno and Stanislaus counties?

Fresno County is eagerly seeking to join the YARTS Management Board, at least as an ex-officio member. This step clearly makes sense, given the importance of the Fresno-Yosemite International Airport, Fresno's large population, and its position as a gateway to Southern California. At what point should Fresno County have full-fledged representation on the Board? Similarly, should Stanislaus County join the Board, and in what capacity?

How will the Park Service measure if YARTS' "success" will allow them to implement all or some of the changes described in the GMP?

Park Service staff have suggested orally that they will give YARTS a good chance for success before implementing parking space reductions called for in the GMP. What specific triggers will the Park Service be looking for? Whatever the Park Service decides, it will be critical for them to give YARTS at least 18 month's notice before making any changes to parking, access or circulation in the Valley, so that YARTS will have sufficient time to adjust its service.

At what point will YARTS transition from vendor-owned to YARTS-owned vehicles?

We have assumed that YARTS will begin the public ownership of buses in Phase 2. These buses could be used by private operators to provide service, as is common in many publicly controlled, privately operated transit services. This step will be a watershed moment for YARTS, a declaration that YARTS transit service is here to stay. The support of the gateways, the proven stability of the organizational structure and the proven success of the earlier YARTS service will all need to be in place before this step can be taken.

Who will construct and operate alternative fueling centers? How will YARTS transition to cleaner-fueled vehicles?

YARTS is committed to using the most cost-effective, viable alternative fuel available. Currently, compressed natural gas is the only fuel type that can power over-the-road coaches up the grades and over the distances YARTS must travel. Unfortunately, there is no natural gas now available in the Valley or the near gateway communities. Should YARTS have CNG trucked in? Should YARTS wait to see if fuel cell technology is applied to buses? Should YARTS wait to see if hybrid electric vehicles can handle Sierra grades? Developing sources for alternative fuels can be time-consuming and expensive, and these questions will require a good deal of further study.

It is premature at this stage in the study to attempt to answer any of these questions. Future phases of the YARTS study should address them based on the experience of the demonstration and Phase 1 services.

Throughout this period, the consultants, YARTS staff, local governments and the National Park Service should continue to work together to identify intercept parking locations and identify them to the Board. In addition, staff, consultants and the Park Service should work on the

planning, design, environmental clearance and construction of these facilities for future service expansions.

At what point will rail be a viable option, and in which corridors?

The proposed YARTS bus service is seen as the best option for improving access to Yosemite National Park in the short term. At some point rail service may become a viable and perhaps preferred option in some corridors. The board will need to determine when that point is being reached, with enough lead time to implement needed improvements in time to provide service.

CHAPTER 9: CAPITAL PLAN

This chapter presents the Short and Long Range Capital Program required for implementation of each phase of the locally preferred *Phased Transit Alternative*. The chapter begins with an overview of several important assumptions. Section two outlines the capital requirements for each phase which includes buses, parking facilities and other capital improvements. Section three presents the short term capital programming schedule. The final section provides an overview of issues related to alternative fuels.

ASSUMPTIONS

The Short and Long Range Capital Program includes several important assumptions which are described below:

Capital costs and inflation factors

In order to maintain the consistency established throughout the working papers, all capital costs, *regardless of when the items are programmed*, are presented in 1998(\$).

Rate of development in each corridor

It is unlikely that all four corridors will proceed through the four service phases at the same rate. The primary trigger for each new phase is the success of the preceding phase. It is not unreasonable to assume that ridership in each corridor will develop at different speeds and thus one or two corridors might be ready to move into a new phase before the others. *However, for the purposes of creating this Capital Plan, it has been assumed that all four corridors will develop at approximately the same pace.*

Buses

Based on the feedback received during the public workshops, it is assumed that the YARTS buses will need to be of very high quality. The specific size of the vehicle is less important than the overall quality which includes seating area comfort, storage and visibility. For the purposes of this plan, buses were assumed to be over-the-road-style coaches (or equivalent), equipped with comfortable, high-back reclining seats, reading lights, ample storage, interpretive information and other amenities. The 1997 estimated cost for such a vehicle is \$350,000.¹

It is anticipated that these buses will be fueled by some type of alternative fuel. This issue is discussed in greater detail at the end of this chapter. Use of an alternative fuel will likely

¹Source: Working Paper #15, pages 1-5.

increase the total cost per bus from \$350,000 to \$410,000. A cost of \$410,000 per bus has been programmed into the Capital Plan.

Bus Facilities

No maintenance or storage facilities have been included in this Capital Plan, since they are assumed to be provided by private operators who operate the YARTS services. Should a publicly owned facility be required it is likely a long range requirement only, associated with the larger bus fleet required under Phases 2 and 3.

Location of Parking Sites

During the Demonstration Project, and in Phase 0, YARTS will serve only existing lodging and camping facilities and parking areas along each of the highway corridors. Many of these sites were described in Working Paper #7.

It is assumed that staging and intercept facilities will be developed along all of the corridors sometime during Phases 1-3. As these sites begin to develop the service in each corridor will be modified so that it runs only as far as the *closest available* staging area.

The Cost to Develop Parking

A variety of factors contribute directly and/or indirectly to the cost of developing parking facilities. These factors include:

- The cost to acquire or purchase land
- The cost of mitigating any environmental hazards
- The size (# of spaces) of the facility
- The design of the facility (surface lot vs. structure vs. underground)
- Landscaping
- Drainage
- Utilities

In reality, cost factors will almost certainly vary by site and corridor. In some cases, low cost or free parking sites can be developed by sharing parking with other seasonal activities. Schools represent a prime opportunity for sharing parking that is lightly used in summer. *However, for the purposes of this Capital Plan it is assumed that the cost per space for developing parking will be the same throughout each of the four corridors.*

The cost to develop parking **within** YNP is estimated at \$3,000 per space (construction only, no mitigation or acquisition costs), while the cost per space to develop outside the Park is estimated at \$5,000 (includes construction, mitigation and acquisition).²

Passenger amenities at parking facilities

A minimum level of passenger amenities will be required at each parking facility served by YARTS buses. For the purposes of this Capital Plan it is assumed that parking facilities throughout all four corridors will share a basic minimum of amenities at each site which includes one shelter, one bench and one or two bus stop signs. *The cost for this minimum set-up is estimated at \$2,700 per site.³ The larger intercept facilities (more than 400 parking spaces) will need a minimum of \$5,400 in improvements per site, including more landscaping and additional passenger amenities.*

CAPITAL PLAN

The Capital Plan has been divided into two components: a Short Term Plan and a Long Term Plan. The Short Term Plan covers the Demonstration Project and Phases 0 and 1. Phase 0 would essentially complete a two-year demonstration of service beginning in FY 1999/00. The Long Term Plan includes Phases 2 and 3. These Phases are considered long range (more than five years) for implementation since they require a significantly higher level of investment in facilities than do Phases 0 and 1. The Capital Plan is displayed in Figure 9-1

Short Term Plan (*Demonstration Project and Phases 0 and 1*)

Demonstration Project and Phase 0

The Demonstration Project and Phase 0 are considered together since these early phases have minimal capital needs. Phase 0 can be seen as the second year of a two year demonstration service. The service description for these two phases is essentially the same.

Service Goal

The goal of the Phase 0 is to provide just enough bus service (12,400 hours) to eliminate gate closures. In this Phase, service will be provided to existing sites along each of the four corridors:

- Highway 41 to Oakhurst
- Highway 140 to Mariposa

²Source: Nelson\Nygaard database and conversations with DKS Associates (5/98)

³Source: Nelson\Nygaard Database (1998)

- Highway 120 West to Groveland
- Highway 120 East to Tuolumne Meadows (no new parking anticipated at this location)

Buses

Private operators will provide all of the revenue vehicles, including spares, and thus YARTS will not have to purchase any vehicles during this phase.

COST FOR BUSES = \$0

Parking

YARTS will not have to construct any parking facilities since service is provided only to existing lodging and camping facilities.

COST FOR PARKING = \$0

Other Capital Improvements

Signs, shelters and benches will be needed at each of the lodging and camping facilities serviced by YARTS. The estimated number of sites includes:

- 9 sites on Highway 120 West
- 26 sites on Highway 41
- 31 on Highway 140.
- 3 sites on Highway 120 East (all within the Park)

This is just an estimate. The actual number of facilities could be slightly higher or lower at the time service begins in 1999. At an average cost of \$2,700/site the total cost of these improvements is just over \$186,000.

COST FOR OTHER CAPITAL IMPROVEMENTS = \$186,300

DEMONSTRATION & PHASE 0 - TOTAL CAPITAL COSTS = \$ 186,300

Phase 1

Service Goal

Staging areas will be developed along each corridor during Phase 1. Along Highways 140 and 41, existing parking facilities will be expanded to create the staging areas. Near the junction of the Highway 120 West and East corridors a new intercept parking facility will be created. The level of bus service will increase to just over 28,000 hours per year.

Buses

Private operators will continue to supply all of the revenue vehicles and spares, and YARTS will not need to spend any money on buses in this Phase.

COST FOR BUSES = \$0

Parking

Improvements to parking facilities will come in two forms:

- On the Highway 120 East/West corridors a new staging facility with parking for up to 400 cars will be developed **within the Park** near the Highway 120 Junction, in the general vicinity of Crain Flat.
- On the 41 and 140 corridors existing facilities will be expanded where possible to accommodate small staging facilities.

COST FOR PARKING = \$2.9 MILLION

Other Capital Improvements

Additional shelters, benches and signs will be needed as parking is expanded at existing sites along Highways 41 and 140 and at the new 400 space staging area near the Highway 120 Junction.

COST FOR OTHER IMPROVEMENTS = \$159,300

PHASE 1 - TOTAL CAPITAL COSTS = \$3 MILLION

Phase 2

Service Goal

Phase 2 will begin when either: a) demand for YARTS service has increased of its own accord or b) the Park Service has begun restricting private passenger automobile traffic into the Valley. At this time, additional staging areas will need to be built outside of the Park. The level of YARTS bus service will need to increase by almost 400% from 28,000 to 124,000.

Buses

In Phases 0 and 1 all of the vehicles are provided by the contract operator. In Phase 2, YARTS will purchase vehicles and provide them to the contract operators so that YARTS can ensure the continuation of high quality of service *while simultaneously* introducing clean fuel equipment. Fleet consistency both for operating cost and system image, will also become more important at this stage. The increase in service levels will require that the fleet used for YARTS service increase from 33 vehicles to 125. These vehicles will need to be high quality over-the-road buses (OTRBs) as noted in the Assumptions section at the beginning of this chapter. A discussion of alternative fuel issues can be found near the end of this chapter.

The cost per bus for an OTRB, using some type of alternative fuel, will be approximately \$410,000 (1998\$). New technologies will clearly result in "refined" costs over time.

COST FOR BUSES = \$51.3 MILLION

Parking

The Phase 2 parking program includes the following improvements:

- The intercept parking lot near the Highway 120 Junction will be expanded from 400 spaces to over 1600 spaces.
- New intercept parking facilities are needed along the 41 corridor (over 900 spaces) and the 140 corridor (over 800 spaces)

COST FOR PARKING = \$13.7 MILLION

Other Capital Improvements

Signs, shelters and benches will be needed at the existing Highway 120 intercept site and each of the new facilities developed along the other two corridors.

COST FOR OTHER CAPITAL IMPROVEMENTS = \$46,200

PHASE 2 - TOTAL CAPITAL COSTS = \$65 MILLION

Phase 3

Service Goal

YARTS annual service hours doubles from 124,000 in Phase 2 to over 248,000 in Phase 3. The service increase is needed to keep pace with the anticipated reduction of another 600 parking spaces in the Valley.

Buses

YARTS will need to purchase another 92 OTRBs.

COST OF BUSES = \$37.7 MILLION

Parking

New intercept parking facilities will be needed on each corridor to provide the following number of new parking spaces:

- 910 spaces Highway 120 West and East corridors
- 496 spaces Highway 41 corridor
- 430 spaces Highway 140 corridor

COST OF PARKING = \$9.2 MILLION

Other Capital Improvements

As with the other phases, additional benches, shelters and signs will be needed as new parking facilities are developed.

COST OF OTHER CAPITAL IMPROVEMENTS = \$24,900

PHASE 3 - TOTAL CAPITAL COSTS = \$46.9 MILLION

Summary of Capital Plan

The four phases of the recommended alternative will require dramatically different levels of investment in capital facilities. The levels of investment are directly tied to the amount of service being provided by YARTS. The capital requirements for each phase are shown in Figure 9-1.

FIGURE 9-1
CAPITAL COSTS (PHASES 0-3)

	BUSES		PARKING			OTHER CAPITAL IMPROVEMENTS		
	# of buses to purchase	Total Cost (1)	Parking Location (7)	# of new spaces (7)	Total Cost	Capital Improvements Outside YNP	Total Cost	Total Capital Cost
PHASE 0	-	\$ -	Highway 120 Corridor (East and West) (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Groveland: 9 sites)/(120 E: 3 campground sites)	\$32,400	
			Highway 41 Corridor (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Oakhurst: 26 sites)	\$70,200	
			Highway 140 Corridor (No new parking; Serve only existing lodging facilities)	-	\$0	Signs/Shelters/Benches (4) (Service to Mariposa: 31 sites)	\$83,700	
			Total Parking Costs for Phase 0	-	\$0	Total "Other Capital Items" Phase 0	\$186,300	\$186,300
PHASE 1	-	\$ -	Highway 120 Corridor (East and West) (2) (Develop new staging facility inside YNP near the 120 Junction)	400	\$1,200,000	Signs/Shelters/Benches (5) (6) (Amenities for new intercept site)	\$5,400	
			Highway 41 Corridor (3) (Develop staging facilities at existing parking/lodging sites)	200	\$1,000,000	Signs/Shelters/Benches (6) (Upgrading amenities at all 26 existing sites)	\$70,200	
			Highway 140 Corridor (3) (Develop staging facilities at existing parking/lodging sites)	140	\$700,000	Signs/Shelters/Benches (6) (Upgrading amenities at all 31 existing sites)	\$83,700	
			Total Parking Costs for Phase 1	740	\$2,900,000	Total "Other Capital Items" Phase 1	\$159,300	\$3,059,300

NOTES:

Cost Assumptions

(1) Total cost assumes a cost per bus of:	\$410,000	Cost for a 45' over-the-road-bus operating on some type of alternative fuel	Source: Working Paper #12, page 4
(2) Cost per Parking Space inside YNP	\$3,000	Construction costs only (assumes no acquisition or mitigation costs)	Source: Working Paper #9, page 22
(3) Cost per Parking Space outside YNP	\$5,000	Cost includes acquisition, mitigation and construction	Source: Conversation with DKS Associates (5/11/98)
(4) Amenities @ Existing Lodging Site	\$2,700	Cost includes one sign, shelter and bench per site	Source: Nelson\Nygaard Database
(5) Amenities @ Upgrade Existing Site	\$2,700	Cost includes providing additional signs, shelters and benches as needed	Source: Nelson\Nygaard Database
(6) Amenities @ Intercept Site	\$5,400	Cost includes multiple signs, shelters, benches and misc improvements per site	Source: Nelson\Nygaard Database
(7)			Source: Working Paper #15, pages 4-3 thru 4-4

FIGURE 9-1
CAPITAL COSTS (PHASES 0-3) (CONTINUED)

	BUSES		PARKING			OTHER CAPITAL IMPROVEMENTS		
	# of buses to purchase	Total Cost (1)	Parking Location (7)	# of new spaces (7)	Total Cost	Capital Improvements Outside YNP	Total Cost	Total Capital Cost
PHASE 2	125	\$ 51,250,000	Highway 120 Corridor (East and West) (2) (Expand existing facility inside YNP)	1,657	\$4,971,000	Signs/Shelters/Benches (5) (Upgrading amenities at existing intercept site)	\$22,400	
			Highway 41 Corridor (3) (Develop new intercept parking facilities along the corridor)	920	\$4,600,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$12,500	
			Highway 140 Corridor (3) (Develop new intercept parking facilities along the corridor)	830	\$4,150,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$11,300	
			Total Parking Costs for Phase 2	3,407	\$13,721,000	Total "Other Capital Items" Phase 2 \$46,200		\$65,017,200
PHASE 3	92	\$ 37,720,000	Highway 120 Corridor (East and West) (3) (Develop new intercept parking facilities along the corridor)	910	\$4,550,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$12,300	
			Highway 41 Corridor (3) (Develop new intercept parking facilities along the corridor)	496	\$2,480,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$6,700	
			Highway 140 Corridor (3) (Develop new intercept parking facilities along the corridor)	430	\$2,150,000	Signs/Shelters/Benches (6) (Amenities needed at new intercept site)	\$5,900	
			Total Parking Costs for Phase 3	1,836	\$9,180,000	Total "Other Capital Items" Phase 3	\$24,900	\$46,924,900
TOTAL	217	\$ 88,970,000	Total Parking Costs for All Phases	5,983	\$25,801,000	Total "Other Capital Items" for all Phases		\$115,187,700

NOTES:

Cost Assumptions

(1) Total cost assumes a cost per bus of:	\$410,000	Cost for a 45' over-the-road-bus operating on some type of alternative fuel	Source: Working Paper #12, page 4
(2) Cost per Parking Space inside YNP	\$3,000	Construction costs only (assumes no acquisition or mitigation costs)	Source: Working Paper #9, page 22
(3) Cost per Parking Space outside YNP	\$5,000	Cost includes acquisition, mitigation and construction	Source: Conversation with DKS Associates (5/11/98)
(4) Amenities @ Existing Lodging Site	\$2,700	Cost includes one sign, shelter and bench per site	Source: Nelson/Nygaard Database
(5) Amenities @ Upgrade Existing Site	\$2,700	Cost includes providing additional signs, shelters and benches as needed	Source: Nelson/Nygaard Database
(6) Amenities @ Intercept Site	\$5,400	Cost includes multiple signs, shelters, benches and misc improvements per site	Source: Nelson/Nygaard Database
(7)			Source: Working Paper #15, pages 4-3 thru 4-4

SHORT TERM CAPITAL PLAN PROGRAMMING SCHEDULE

The preceding section described the capital requirements and costs associated with each phase of service. Many of these costs, however, must be programmed (incurred) in the phase that *precedes* their period of use. Because facilities require 2-3 years between site selection and completion and bus procurement requires about the same time, funds must be programmed for capital projects several years before service is upgraded.

Figure 9-2 displays the programming schedule for the short term capital plan (Phases 0 and 1). Over the next six years, a total of \$8.2 million will be needed for capital expenditures. This amount will cover the costs associated with all of the capital needs in Phases 0 and 1, plus the preliminary design, engineering and environmental work that will be needed for the new parking facilities in Phase 2. It should be noted that this programming represents a relatively slow and careful "ramping" of service over the initial years of the program.

FIGURE 9-2
SIX YEAR CAPITAL BUDGET PROGRAMMING SCHEDULE

Category	FY 1998/99	FY 1999/00	FY 2000/01	FY 2001/02	FY 2002/03	FY 2003/04
Parking Facilities <i>Design</i> <i>Environmental</i> <i>Engineering</i>	\$1,139,000 (For Phase 1)	\$561,000 (For Phase 1)			\$1,644,000 (For Phase 2)	\$1,644,000 (For Phase 2)
Parking Facilities <i>Acquisition</i> <i>Mitigation</i> <i>Construction</i>		\$700,000 (For Phase 1)	\$1,100,000 (For Phase 1)	\$1,100,000 (For Phase 1)		
Other Capital <i>Signs</i> <i>Shelters</i> <i>Benches</i>	\$178,200 (For Phase 0)	\$159,300 (For Phase 1)				
TOTAL	\$1,317,200	\$1,420,300	\$1,100,000	\$1,100,000	\$1,644,000	\$1,644,000

This schedule **does not** include any of the costs associated with purchasing the buses needed for service in Phase 2 because Phase 2 is expected to be implemented beyond the planning horizon of this short term plan. However, consideration should still be given to programming funds for bus procurement.

A bus procurement cycle typically takes about two years to complete - from the time a specification is written to the time when the last vehicle is delivered. Given the suggested programming of funds for buses, Phase 2 can not realistically begin until approximately FY 2007/08. Beginning service in this year would require vehicle specifications to be completed no later than FY 2003/04. This decision on specifications would include making a choice about the use of alternative fuels. Should indicators suggest that Phase 2 implementation should be accelerated, the bus procurement schedule should be accelerated as well.

A time line for YARTS bus procurement might look something like this:

- Year 1 YARTS makes a decision about optimal fuel choice
- Year 2 YARTS investigates and secures capital funds
 YARTS issues vehicle specifications and accepts bids
- Year 3 YARTS takes delivery of 30 buses
- Year 4 YARTS takes delivery of another 30 buses, etc.

In this schedule, Year 1 would begin in the year when the first Phase 2 trigger (expanding YARTS demand, NPS imposed access restrictions on auto access) can be foreseen. Ideally Year 1 and Year 2 tasks should be done as soon as practical so that YARTS is in a position to respond quickly to a changing marketplace.

Alternative Fuels

At the present time, there are no over-the-road-buses (OTRBs) operating in the United States which are certified to run on any fuel other than diesel fuel and it is unclear if any OTRB manufacturers plan to offer such equipment within the next decade. The most likely reason for this lack of development is that OTRBs are not subject to the same strict emission control standards as heavy-duty transit buses and thus there is little if any incentive for OTRB manufacturers to offer equipment with alternative fuel engines.

This current lack of alternative fueling options raises two questions:

1. Will there be any over-the-road-buses certified to operate on alternative fuels when YARTS is ready to purchase equipment in 7-10 years?
2. If there are alternatively fueled OTRBs available, and there's more than one option, then what will be the optimal choice for fuel?

Availability of equipment

Even though alternative fuel equipment is currently not available it probably would only take a few years for manufacturers to get a product to market, given the right incentives. To get an

idea of how quickly an alternative fuel version OTRB could be developed, one need only to look at what happened in the heavy-duty transit bus industry. As recently as 1990 just over 98% of all heavy-duty transit buses were operating on diesel fuel. Today the percentage operating on diesel has declined to approximately 80%. Within the next decade the diesel percentage of the nation's transit fleet should drop to 50%. Transit operators currently have a variety of fueling choices ranging from electric to natural gas to alcohol-based fuels.

One of the driving forces behind the development of alternative fuel transit buses was the strict emission control standards enacted by the EPA in the early 1990s. It was assumed that diesel technology would be incapable of meeting the standards and this fear led to the growth of alternative fuel versions of traditional diesel power-plants. Much to everyone's surprise, however, engine manufacturers improved diesel technology to the point that it now meets the EPA standards and should continue to be a viable power-plant option well into the next decade.

The key to the future development of alternative fuel versions of OTRBs is the presence of incentives. If the EPA creates new emission standards for OTRBs then this alone might force manufacturers to develop alternative fuel versions of their buses.

The other incentive is simply market forces. Up to this time, there really has been no market for alternative fuel OTRBs. However, this could change if manufacturer's see some profit potential. A YARTS procurement of over 200 buses and \$88 million dollars could be what is needed to "prime-the-pump".

Optimal fuel choice

Assuming that alternative fuel OTRBs are available in the future, a discussion about which fueling option to pursue should be delayed. Power plant technology is changing at a rapid pace and what might be the "optimal" choice today may well be an inferior choice in the near future. For a good example of how quickly things can change one need look no further than the Los Angeles Metropolitan Transit Authority's methanol fuel program. In the early 1990's methanol was being touted as the fuel of the future. MTA embarked on a five year methanol demonstration program using over 300 vehicles from its fleet. Within three years, however, the program was discontinued because of poor engine reliability.⁴ MTA switched the methanol vehicles over to ethanol but the results were even more disappointing.

In the future, it is reasonable to assume that OTRBs will incorporate the same alternative fuel technology and options as today's heavy-duty transit buses. The following section provides a brief overview of alternative fuel options currently on the market and/or which are expected to enter the market within the next few years.

⁴This program may be revived since it was learned that the primary cause of reliability problems appears to be the MTA's use of inferior pumping equipment rather than poor fuel quality.

Current options

- Diesel
- Bio-Diesel
- Methanol
- Ethanol
- Natural Gas (CNG/LNG)
- Propane (LPG)
- Electric (Battery)

Diesel

The diesel engine has been the preferred alternative in heavy-duty vehicle applications for several decades because of its efficiency, good reliability, long life, use of low cost fuel, and low operating costs. Diesel engines, however, create large amounts of two pollutants: Nitrogen Oxide (NOx) and particulate matter (PM10). *NOx is one of the main components in smog. PM10 contributes to respiratory disease and is suspected of causing cancer and birth defects.*

Just two years ago, diesel was scheduled to be phased out as a fueling option following the 1997 model-year because it was believed that diesel technology had reached its theoretical maximum for reducing emissions. However, Detroit Diesel Corporation and Cummins Engine have both been successful in further improving emissions control technology. These emission improvements came about **without** the need for expensive and unreliable after-treatment strategies such as particulate traps.

Diesel engines remain a very attractive option for transit and OTRB buses because diesel fuel:

- is already in use
- requires no changes to existing fueling or maintenance facilities
- requires no additional training for maintenance or operations personnel
- should continue to be readily available for years to come
- is still the cheapest fuel

Bio-Diesel

Bio-Diesel, also known as Soy Diesel or B20, is typically a blend of 80% diesel fuel and 20% Bio-Diesel (soybean oil). Bio-Diesel can be produced from any plant, or animal, derived oil product.

Bio-Diesel is the fueling alternative that most closely mimics traditional diesel engine operations. For the most part, Bio-Diesel can be used directly in an un-modified diesel engine, although depending upon the age of the engine some of the seals and gaskets might need to be replaced to avoid leaks.

The main advantage of Bio-Diesel is that it can be used in a regular diesel engine, and thus there is no incremental cost for more expensive coaches, fueling facilities, or maintenance facilities.

The main disadvantage of Bio-Diesel is that engine manufacturers have yet to certify the fuel for use in conventional diesel engines, and thus use of the fuel may void the manufacturers warranty. Maintenance staff should check with the respective engine manufacturer to get the most up-to-date information. Bio-diesel engines have been shown to be less reliable than diesel mostly due to problems with fuel quality which leads to damaged fuel filters.

Another disadvantage of Bio-Diesel is the relatively high cost per gallon of the fuel when compared to other alternatives. The number of suppliers of this fuel is very small which translates into high prices. *Another version of Bio-Diesel called B100 is currently being evaluated by the US Department of Energy as a "preferred alternative" in lieu of B20, but more analysis is needed before the DOE will certify the fuel.*

Bio-Diesel requires no special safety precautions and poses no more of a hazard to passengers and employees than standard diesel fuel.

Methanol

Methanol (M100), or methyl alcohol, is a clear, colorless liquid that can be made from a variety of sources including coal, natural gas, and some grains. All methanol used commercially in the United States is made from natural gas because this is the most economical method. Methanol, by volume, has slightly less than half the energy content of diesel fuel. Consequently, in order to have the same operating range a methanol fueled bus will typically require twice as much fuel as a standard diesel bus.

Methanol, like diesel fuel, is toxic and requires some special handling. Special materials are required, both in the vehicle fueling system and in the fuel dispensing and storage system (methanol is incompatible with aluminum, rubber, and some sealing and gasket materials commonly used with petroleum-based fuels). Special safety equipment is also needed, including fire detection and suppression as methanol is readily ignitable and burns with a flame that is difficult to see in daylight.

Methanol is dispensed like any liquid fuel. The only difference between methanol and diesel fueling is that corrosion resistant materials must be used for those components of the fueling

system that have direct contact with the fuel. Dispensing times are essentially the same as for other liquid fuels.

Ethanol

Ethanol is an alcohol based fuel derived from biomass (corn, sugar cane, grasses, trees and agricultural waste). There are two types of commercially produced ethanol: E93 (93% ethanol, 5% methanol and 2% kerosene) and E95 (95% ethanol and 5% unleaded gasoline). A number of transit properties in the Midwest, including Greater Peoria Transit in Peoria Illinois and The Metropolitan Transportation Commission in Minneapolis Minnesota, use ethanol in a modified version of the DDC 6V-92TA engine.

One of ethanol's biggest advantages is that it is made from agricultural products and thus is considered a renewable source of energy. Ethanol also requires only minor modifications to existing fueling, safety and engine systems. There are though several important disadvantages which limit the viability of ethanol as a fuel source for transit buses. One important drawback is the price of fuel. Ethanol is readily available in the Midwest but the numbers of west coast suppliers is extremely limited.

Ethanol fueled engines have their share of reliability problems. The Los Angeles MTA switched many of their methanol buses to ethanol but quickly discontinued that demonstration project once they learned that ethanol was causing even more road calls than methanol.

Natural Gas (CNG and LNG)

Natural gas primarily consists of methane (93%) with a mixture of other gaseous hydrocarbons. It is derived from wells or in conjunction with crude oil production. Current consumption (90%) comes from domestic sources and the US has proven gas reserves of 170 trillion cubic feet. *Switching to natural gas as a fuel has been shown to virtually eliminate almost all particulate matter (black smoke) from urban transit buses.* Given the domestic reserves of gas, the growing natural gas infrastructure, the reliability of natural gas engines it's no wonder that natural gas has become the fuel of choice for the majority of transit properties making the switch to an alternative fuels.

There are two storage options with natural gas: Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG). Both options require capital intensive fueling facilities and high pressure storage containers on-board the vehicle. Because of the greater volume of gas required for comparable range, very large tanks are needed for CNG (typically, about four times the tank volume is needed compared to diesel fuel). The increased size and weight of the fuel tanks reduces passenger carrying capacity and contributes to greater tire wear.

LNG, on the other hand, takes up 1/3 the volume of compressed gas and thus the LNG fueling tanks are only 1/3 of CNG tanks. Since LNG tanks are smaller and lighter there is less wear

and tear on the vehicles and more room for passengers. However, LNG requires a more extensive, and thus more costly, on-site treatment process than CNG in order to get the gas to a liquefied state.

There are essentially four options for natural gas fueling:

- mobile fuel delivery
- on-site slow fill
- on-site fast fill
- off-site fueling

Mobile Fuel Delivery – Under the mobile delivery option, a contractor is hired to deliver natural gas on a daily basis. The gas is delivered compressed, eliminating the need for compression on-site. The cost per equivalent gallon of the fuel is higher, but there are significant capital cost savings from not having to build a compressor station.

This system uses a manifold system to deliver the fuel to each vehicle. The yard has to be laid out to accommodate this activity. At Austin Metro, this is done with a double wide lane with 16 buses on each side which are parked facing in. The manifold line goes down the center. Poles are spaced along this with 4 dispenser lines on each pole. The bus driver or service worker completes all of the servicing except vehicle fueling, parks the coach in an assigned spot, and connects the fuel line to the vehicle. When the mobile truck arrives, the gas valve on the manifold is open, and 32 vehicles can all be fueled simultaneously.

This system may require yard layout modifications which might not be possible at some or all of the existing yards. However, if this can be done the actual staff time required to complete the fueling cycle is dramatically reduced. No staff need to be present while the actual refueling takes place. The time to fill a fleet varies depending upon the total amount of fuel that is dispensed. Most mobile trucks have a sustained off-load rate of 7 equivalent gallons per minute. If, for example, 7 vehicles are on the manifold line and they are each taking 50 equivalent gallons of fuel, it would take just under 1 hour to fill all 7 vehicles.

On-Site Slow or Fast Fill – Both of these systems involve the use of on-site compression, with or without the use of additional storage tanks depending upon the total volume of gas dispensed. Under slow fill, a manifold is used to fill the fleet under low pressure, which can take several hours. As with mobile delivery, the yard layout necessary to accommodate the manifold may not be

possible at some of the yards. For very high gas volumes it may take so long to fill the fleet that this cannot be done between the time that service ends on one day and begins on the next. It would be possible to do daily fueling in two cycles — part of the fleet would be done mid-day and the rest would be done during the night. This could be complicated to manage unless vehicles have regular run and parking assignments.

Fast fill operates the same as current diesel refueling. Each vehicle is filled individually from a dispenser. A dispenser can have more than one hose, or more than one lane can be used for larger fleets.

Off-Site Fueling – In this system, the vehicle is driven to a local public fueling station or to a card-lock fuel service area that is used by fleet operators. Card-lock operations generally provide discounts depending upon the fuel volume used. Public fill stations may also be set up to provide a price break to the public transit system.

LNG

There are two basic methods of LNG fuel supply: mobile delivery to on-site storage tanks or on-site liquefaction. The mobile delivery to on-site storage involves purchasing LNG from a storage center or manufacturing facility. The fuel is then transported by tanker truck to on-site storage tanks and is dispensed similarly to any other liquid fuel. This would require providing yard space for the fuel storage and regular access for the tanker truck.

CNG buses have been successfully operating in fleets around the country for several years including Sunline Transit in Southern California, Los Angeles MTA, Sacramento RT, Yolobus and UNITRANS. Fleet demonstrations using LNG technology have been limited to date, but are expected to increase this year. *Raleys Supermarkets is currently testing a fleet of LNG fueled trucks in the Sacramento area. More information about this project should be available in the coming months.*

Propane

Liquefied Petroleum Gas (LPG) is a mixture of propane, butane and butane. The United States supply of LPG comes from either "stripping" these gases during the process of collecting natural gas, or as a by-product of petroleum refining.

LPG is the third most commonly used automotive fuel in the U.S., surpassed only by gasoline and diesel. Most of the vehicles currently operating on LPG use "after-market" conversions of gasoline or diesel engines, modified to take advantage of the lower cost of LPG.

LPG has been used mostly in the agricultural sector although there are some commercial operations with large LPG fleets. The L.A. Times has a large LPG fleet of delivery trucks, some with over 500,000 miles of service.

The outlook for LPG versions of heavy-duty engines does not appear promising. Caterpillar does have an LPG version of its 3306 engine, but Caterpillar is an extremely small player in the bus engine market. Cummins has not decided what it plans to do with LPG. Detroit Diesel just announced last year that it has canceled its LPG heavy-duty engine program, which should all but kill LPG as an option for the near future.

Electric

Just within the last few years a few manufacturers, such as Specialty Vehicle Manufacturing and APS, have rolled-out full size electric/battery-powered buses. These 35' and 40' vehicles are being used in demonstration programs around the country. YNP is even using a full size electric bus as part of its shuttle fleet in the Valley.

It is not very likely that an electric powered OTRB will be on the market within the next decade. The sheer weight of an OTRB, coupled with limitations in electric power drive-trains and battery technology, will limit the use of full size battery powered buses to local fixed route and shuttle services.

Soon-to-be-available Fueling Options (2-5 years)

In addition to the changes in standard engine development (diesels and natural gas) there are two promising technological developments taking place in the arena of electric drive vehicles: Fuel Cells and Hybrid Internal Combustion Engines. Much of the work being done with these technologies is considered proprietary and thus detailed information is extremely limited. In discussions with vehicle developers, it is expected that hybrid vehicles should be available in two to three years, with fuel cell powered vehicles arriving in five to seven years.

Fuel Cells

The fuel cell is a device which produces electricity by catalytically reacting hydrogen and oxygen to form water. The reaction is continuous, so long as the fuel and oxidant are supplied. The energy source for the fuel cell can be any number of fuels including reforming natural gas, methanol, heavy hydrocarbons, diesel oil, or hydrogen. Much research and design is now underway using fuel cells powered by methanol, natural gas and hydrogen. Although fuel cell technology offers promise in the transit bus market there are some problems still to be resolved. These include the size, weight, and high cost of present fuel cell systems. BC Transit and Ballard Power Systems in Canada are currently testing several different fuel cell transit buses. The results of this demonstration program should be available by the end of 1998.

Fuel cells show great promise because they have the potential to create **zero** emissions and they use substantially less fuel than any other fueling option. Their biggest drawback is the tremendous cost needed to produce cells powerful enough to move a full size transit bus.

Hybrid ICE/Battery Powered Vehicles

The hybrid electric vehicle consists of an internal combustion engine (ICE) that drives a generator which, in conjunction with storage batteries, supplies power to the vehicle's electric traction motors. Published data is available on a 25' natural gas hybrid electric bus, which was developed by Orion Bus Industries of Ontario, Canada. Many other projects on-going will feature hybrid engines powered by natural gas, methanol and hydrogen.

Here in California, the CALSTART Consortium is currently testing a hybrid vehicle. A 40' Gillig Phantom coach has been outfitted with a Cummins 3.9L engine modified to run on natural gas. This engine runs a generator which powers electric motors. Golden Gate Transit is conducting the field tests. It is estimated that the vehicle will have an operating range of 150 miles. Future versions may be able to reach 200-225 miles, making them suitable for intercity service.

Hybrid engines look very promising for a variety of reasons:

- They closely mimic existing internal combustion and electric powerplants, thus making the transition to this new engine more "comfortable" for maintenance staff.
- The emissions that they generate are likely to be as good as, if not lower than, the emissions from heavy-duty internal combustion engines powered by natural gas.

CHAPTER 10: INCENTIVES AND MARKETING PLAN

For a new transit effort such as YARTS, a marketing and education program is essential to the success of the system. The marketing program must provide a combination of high-quality information resources as well as targeted information and incentives to encourage people to change their behavior. This chapter provides recommendations for a comprehensive marketing approach including incentives and specific marketing techniques targeting different potential rider groups.

Beginning almost immediately, YARTS must be marketed as a unified system of services, operating consistently in each corridor.

CURRENT REGIONAL TRANSIT MARKETING/INCENTIVES

Transit services are currently marketed locally. The small number of local services receive little marketing attention and are not tied to an overall regional strategy. Some examples of existing efforts include the following:

- In Mariposa County, the VIA Yosemite Connection service enjoys limited marketing and incentives such as subsidized fares for Mariposa County residents and the distribution of service schedule information. In addition, limited existing bus stop signs provide an indicator that the service exists. Promotional campaigns such as billboards have been attempted in the past. Both Gray Line Tours and Amtrak market the transit services provided by VIA Adventures.
- The Yosemite Area Traveler Information system (YATI) provides information on transportation including transit services, maps and roadway conditions, at the www.yosemite.com Web Site and at electronic kiosks located at visitor information centers throughout the region.
- The local shuttle bus circulator service within Yosemite National Park is noted in Yosemite brochures, on the Park Web Site, by the YATI system and by Yosemite telephone information operators.
- Fresno's Airport has been named Fresno Yosemite Airport and markets its location to travel agencies and tour operators. During the summer months, the Merced-based bus operator VIA Adventures provides service between Fresno and Yosemite.

POLICIES TO ATTRACT RIDERSHIP

Visitors and employees of Yosemite National Park make transportation decisions based on the same factors that influence all transportation decisions - travel time, cost, ease of use, and quality of experience. The degree to which one of these factors is weighted over another may depend on the type of trip being made. A daily commuter, for example, may be more concerned about travel time and cost than a vacationer, but less concerned about the quality of the experience.

It is not surprising that automobile travel is very popular for all types of trips. In a personal vehicle, the driver is "in control" of much of the experience. The driver chooses his/her travel companions, the route they will take, intermediate stops, etc. Since most drivers consider only a portion of the true cost of driving when evaluating modes, the perceived cost of driving is relatively low. Furthermore, the convenience of driving, including the ability to dictate your own schedule, being able to carry your belongings along with you and other factors will always make driving a popular choice for many types of trips.

Even today, however, there are negatives associated with driving to Yosemite, especially during peak season. Congestion may occur on park roadways, especially in the Valley, detracting from the "natural" experience of visiting a national park. Congestion affects not only the driving portion of the experience, but can affect other parts of the visit, as cars can be heard, seen and smelled from many parts of the Valley. Parking limitations often require cars to "circle", park illegally, or waste precious time traveling from one location to another. Visitors who are unfamiliar with the Yosemite area may be intimidated by the narrow and winding roads; or may prefer to see the sights without concentrating on their driving. Changing weather conditions may also intimidate some drivers, as will the lack of certainty about where they are going.

Outside incentives can encourage a reluctant rider to try transit the first time. Only a quality service can retain ridership.

In thinking about incentives to encourage transit use, it is important to note two important facts:

1. Incentives are designed to motivate potential riders to **try transit for the first time**, by breaking down the barriers to transit use.
2. A **quality service is the best incentive** for transit use. While outside incentives will encourage people to try transit once, only a quality service can maintain ridership.

INCENTIVE CONCEPTS

Incentives are effective when they are designed to break down the barriers to transit use. Often when confronted with a new mode, or something as “brainless” as driving, the potential rider develops a mental list of reasons why they can’t use transit. The incentives described below are designed to answer the most common excuses for not trying transit. Of course, there will always be some trips for which the questions can not be reasonably answered. YARTS mission is to define a service that works well for those that can use it.

I Would Try YARTS...but it’s so much easier to drive.

One of the reasons people don’t use transit more is that it is relatively “brainless” to drive. Using transit requires that you learn something about schedules, bus stops, fares, etc., and may require that you be flexible in your travel times, the amount you carry with you, etc. These incentives are designed to improve the simplicity of the transit trip.

- **Guaranteed access as a primary incentive**

Auto drivers currently enjoy a tremendous amount of freedom in Yosemite National Park. Auto drivers set their own schedule and have been accommodated in numbers exceeding the GMP targets. Auto restrictions have only rarely been implemented. As the park implements the VIP, there will almost certainly be increasing restrictions on auto access to the Valley. The best incentive for using YARTS may come from the fact that restrictions are not anticipated on transit ridership. Riding the bus should be marketed as the one sure way of getting into the Valley and avoiding the hassles associated with driving on a crowded day. YARTS service should be designed to run frequently enough that as to require no advance reservation, eliminating another potential barrier to ridership.

- **Pre-selling rides with travel packages**

Working Paper #10 identified foreign visitors as a target market for YARTS service. Many foreign travelers purchase travel packages, even if they will be traveling independently. By purchasing elements of their trip in advance, and in their home country, the traveler is assured that they understand what they are getting, while limiting the complexities of foreign travel. YARTS rides should be “vouchered” and sold in advance. Visitors may use their pre-paid voucher at any time and need not feel constrained by their schedule.

- **Single fare payment for unlimited travel**

YARTS fares should be published as “day pass” fares, offering unlimited rides on a given day at a single price. When paying a fare, passengers would be given proof of payment, either in the form of a sticker that could be worn or presented, a token (which could be used as a

souvenir) or a “hand stamp”. Passengers could then board and alight wherever they chose, visiting areas outside of the Valley as well as within, without worrying about additional fares.

It should also be remembered that YARTS will offer service over a relatively long service day and in both directions. A small number of trips will be able to be made conveniently between gateway communities or to other destinations that do not involve Yosemite National Park. For example, passengers boarding in Mariposa may be destined to river activities outside of the park, while someone staying at the campground in Midpines may use YARTS to go to dinner in Mariposa.

Using a sticker or token for proof of payment will create a ready-made souvenir. The tokens could also be “pre-purchased” and either given away or sold as part of packages with local lodging and other vendors.

- **Travel packages involving YARTS should be encouraged**

Travel on YARTS could be one element in a comprehensive travel package that would include other amenities such as accommodations, pre-paid or discounted meals, trips to other attractions in the area, and/or many other possibilities. Package travel is attractive to older travelers and foreign visitors who are less independent and would welcome an opportunity to take the “guess work” out of their trip.

Perhaps the ultimate extension of this concept is the idea of “marketing the region” through a single source. This would allow the visitor inquiring, for example, about a room in the Valley to find out that although the Valley is booked, there are rooms available in one or more gateways. The caller could make a reservation for a room, and book a transit trip at the same time. Trips could be prepaid in the same way rooms are prepaid, or could be reserved for payment on arrival. This could be a function of a greatly expanded YATI program, or could be done through a central information center. A coordinated, multi-jurisdictional marketing arrangement exists in the North Lake Tahoe and Salt Lake City resort areas. The team is researching this arrangement for applicability and will include this concept in the marketing plan.

- **Interpretive information should be included on YARTS trips to prepare visitors for their trip**

An average day visitor to Yosemite spends about four hours in the park. For first-time or infrequent visitors, time spent finding out where to go or how to get to their favorite trail is time that could have been spent more enjoyably. The YARTS system should offer a high level of information on-board the buses so that visitors arrive in the park fully prepared for their day of travel. In addition, YARTS should also provide information on attractions in the gateway communities, so that visitors can more easily find other places to visit, including dining, shopping and recreational opportunities.

- **Seamless service should be a critical component of system design**

Giving up your personal vehicle requires a certain amount of risk taking. Transit riders should not be afraid of being “dropped and abandoned” inside the park. This points out the need for high quality information both before and during the transit ride. Passengers should be able to clearly identify transit stops and have ready access to schedule information and other types of transit information throughout their experience. Transfer points should be clearly identified so that riders know what to expect at each location.

I would try YARTS....but it is more expensive than driving

- **Costs should be kept low to avoid pricing as a negative incentive**

Currently, pricing is a disincentive to transit use. An objective in pricing the YARTS service should be to ensure that the cost for a family of three is no more than the perceived cost of driving. Low prices are not generally a major incentive for using transit, but high prices are a significant disincentive, since it is difficult to convince someone to try an expensive alternative.

I would try YARTS...but I never know when it is running

- **Frequent service is needed to combat the freedom of the automobile**

Travelers value their idle time highly. A major disincentive to transit use is the idea that a rider may have to wait a long time for the bus, or may arrive at the bus stop “between headways”. A system that runs very regularly and no less than hourly will provide reasonable competitiveness to the freedom offered by the auto.

Another consideration is the use of “clock” headways, which enable people to count on having a trip routinely at easy to remember points on the clock. In a long route with many stops, it is not possible, for example, to have all stops be on a quarter hour mark. However, consistency is very important, so that if a bus stops every hour at :20 after the hour, it is always at :20 after the hour. This also addresses the need to make the schedule easy to understand, taking some of the risk out of riding.

- **Service spans will need to be broad enough to serve most travel days**

During the summer months, travelers make use of the long days to spend as much time as possible in Yosemite National Park. It will be necessary for YARTS service to start early enough and run late enough to give the visitor some assurance that they won’t be “stranded” if they decide to enjoy all of the daylight hours in the park. This is consistent with the need to run early and late enough to accommodate employees. In transit planning, it is very common to find that very early and very late trips don’t carry many people. However, these

are important as “insurance runs” so that people are convinced that if they are a little slow getting off the trail, or are late for any reason, they are still able to get home.

- **Consistency and reliability are critical**

One of the reasons people drive again and again is because they are familiar with the environment, and can generally be assured a consistent experience. While it is not an incentive *per se*, perhaps nothing is more important than providing a reliable and consistent service. Incentives will help to encourage riders to try transit, but only a consistent and high quality service will keep them on the bus.

I would try YARTS...but I need to carry my gear

- **Storage and lockers are needed to counter the “rolling locker” offered by the auto**

Many visitors who carry large amounts of equipment into the park do so because the car makes it possible. With a trunk and extra room inside, it is possible to pack for every foreseeable weather change, as well as the extra food and equipment the car can carry. YARTS buses must provide storage to allow visitors to carry their gear as easily as possible. However, the need for storage will not end with the bus, as transit riders must be given the opportunity to store their belongings in a central location. For example, extra coats or sweaters may never be needed, but are inconvenient to carry around. A locker that will allow for local storage may allow some riders to consider transit.

As an alternative to providing a great deal of new storage in the park, incentives could be developed to encourage transit riders to travel lighter. Providing discounts on food service or grocery purchases in the park with proof of transit ridership may limit the need to bring food in. Offering free or discounted bicycle and stroller rental would reduce the amount of equipment being carried. Some recreation areas go as far as to provide “loaner” umbrellas rain gear or warm jackets that could be collected on-board the bus in case the weather changes suddenly.

I would try YARTS...but my own car is so much more comfortable

- **YARTS vehicles should provide a very comfortable ride**

The comfort of driving your own car can not be denied. Passengers who choose to ride transit should not be made to give up substantial comfort. In fact, it is possible for transit buses to exceed the comfort of the auto in some respects. At a minimum, transit seats should be highly padded, individually controlled and reclining, as is typical in an over-the-road coach.

Overhead baggage compartments or other location for storing carry-on items such as backpacks should be provided within reason. Reading lights should be offered, so that passengers

have a choice of lighting conditions. Interpretive information in a variety of languages could be offered through audio tapes or CDs, where available. On the longest trips, on-board restrooms will be a needed incentive for riding the bus.

THE PRIVILEGES OF TRANSIT RIDERSHIP

"Special privileges" can be extended to visitors who choose transit. These need not be very costly, and many have already been discussed. They can form the basis for a marketing campaign. Key privileges for increasing ridership are:

- Guaranteed access into the valley
- Discounted or free bicycle rental
- Discounted or free stroller rental
- Discounted or free storage lockers
- Discounts on food service and grocery purchases

One of Nelson\Nygaard's marketing experts has been known to say, "it is amazing what you can get people to do for a refrigerator magnet". The value of such tokens should not be underestimated. It may be possible, for example, to stamp passengers' "national park passport" on board the bus. Tokens or stickers provided as proof of payment may become souvenirs.

These incentives need not be limited to the park itself. Other "tie-ins" could easily be developed in the gateway communities. Giving transit riders a discount on shopping or dining in the gateways, for example, offers the opportunity for joint marketing as well as creating incentives for transit use.

Care should be taken to make transit riders feel good about their choice. Emphasizing their contribution to the environment, including the amount of habitat restoration that could be accomplished by reducing auto impacts. Making bus riders feel like they are doing something positive will reinforce their behavior and give them the feeling that their sacrifices are "worth it".

BUDGET

Marketing costs have been added to each phase of the implementation of YARTS service. For the first two phases, costs are estimated at \$250,000 per year. This budget includes public information, community outreach, signage, labor, the production of on-board programming, etc. During Phases 2 and 3, marketing costs will increase substantially and are budgeted at \$1.0 million per year. Refer to Chapter 11 for the overall financial and cost analysis for

marking and capital items. Where appropriate, unit cost information is provided in the following marketing program.

SYSTEM IDENTITY

System identity is always important, but will be especially important for YARTS where multiple operators may be providing service. A coherent identity will unify these services into an overall program. To promote ridership and the coherence of any transit effort, visual identity is important. When people can easily identify the buses traveling throughout the region as public YARTS buses, they are reminded that transit services are provided to take them to their destination and they may seek information about how to use it. Elements of system identity include the use of logos and the transit system name.

Bus Service Name

"YARTS" is an easily identifiable name for the transit services that will be operating in the Yosemite region. This name and the full Yosemite Area Regional Transit System title should be used regularly on all marketing and service informational materials. It is important to use the YARTS name consistently so that all references to the transit service are called by the same name.

Logo

A logo is an identification device, allowing the public to relate to the service being offered. While some logos are better than others, the most enduring usually suggest simplicity, clarity and familiarity. A drawing/symbol representing Half Dome has become the recognized Yosemite National Park logo. Any logo designed for YARTS should also be added to bus stop signs (as described in the next section) and all regional bus information brochures, advertisements and on prepaid bus tickets. Other items featuring the logo that might be considered include a logo patch on a driver's shirt or promotional items. A logo can be designed for less than \$1,000. The logo and YARTS name can then be put on a driver lapel pin or patch for about \$10 per unit. Other promotional items featuring the logo can be purchased inexpensively.

SIGNAGE

It is important to maximize the casual marketing value of information services such as signage.

Signs on the Buses

Signs on buses are especially important because they allow the service to advertise itself while informing riders about the service.

YARTS buses should display either overhead signs or placards indicating the vehicle destination and all stops between the terminal points. Such signs provide a service to the riders, giving them immediate information about where the bus is traveling. A clear sign at the front of the bus also alerts automobile drivers and pedestrians to the bus destination, creating a virtual advertisement for the service provided.

Overhead signs or window-mount destination signs should appear on **all** YARTS buses. In addition, including a toll-free telephone information number should be posted on the outside of the bus. A printed window-mount destination sign can be designed for less than \$100. Overhead electronic destination signs can be more costly and are included in the capital cost estimates for over-the-road coaches, described in this report.

Signs and Amenities at the Key Bus Stops

Informative bus stops provide an invaluable ongoing marketing function. YARTS buses should stop at locations marked by posted bus stop signs. *Comprehensive marketing requires making everything within the domain of YARTS identifiable.* Comprehensive bus stop information informs people who are not familiar with the transit service that it exists and might be available to them. Bus stop signs also reassure riders that they are at the correct location — something of great concern when buses run long distances with limited frequency.

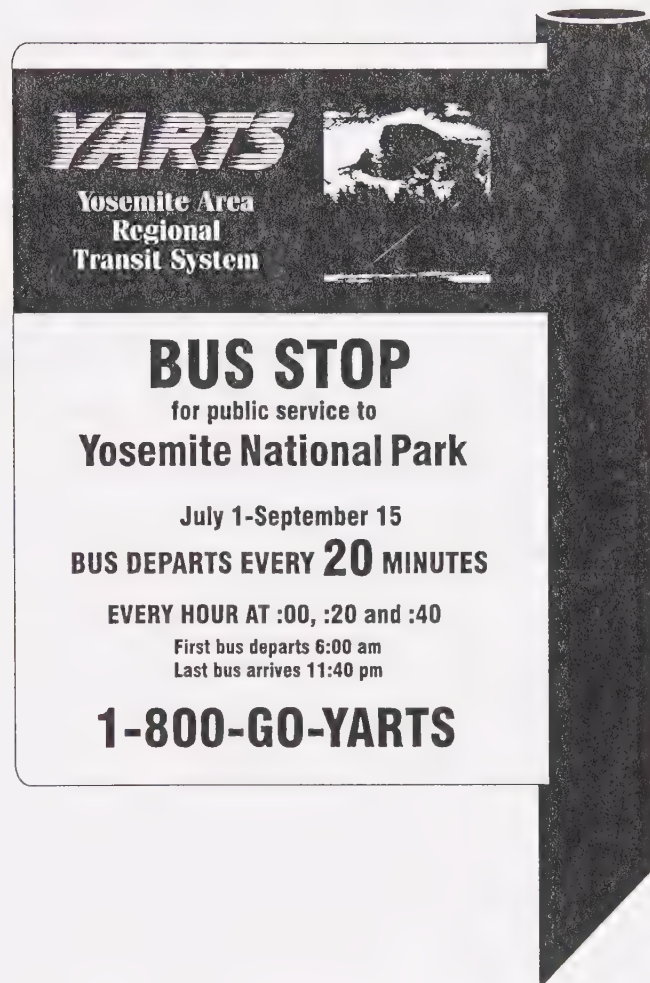
YARTS bus stop signs should provide the following information:

- Bus service name and logo
- Bus service frequency
- Bus stop times, including first departure of day and final arrival

Also at the bus stop location, a map of the service route(s) and payment information should be posted.

A sample a bus stop sign that could serve as a prototype for YARTS is shown in Figure 10-1.

FIGURE 10-1
YARTS SAMPLE BUS STOP SIGN



The per unit cost for a bus stop sign, printed decal and post including mounting and labor, is about \$200.

INFORMATION RESOURCES

Some information can be mailed to visitors or they can read about it or see if on an Internet site. However, once a visitor arrives in the Yosemite area, comprehensive information is required to ensure immediate use. The information necessary includes a YARTS brochure,

telephone information, incentives and other informational resources that may be deemed useful.

YARTS Brochure

It will be necessary for YARTS to create an information brochure specific to bus services available to and from Yosemite National Park. At a minimum, the brochure should provide the following information:

- Overview of the general benefits of using the YARTS transit system
- Fare information, types of fare passes and ways to purchase them
- Map of parking areas, bus routes and key destinations to which transit is available in Yosemite National Park. The map should also include all stop locations.
- Time schedules: information on departure and arrival times for buses at designated parking areas and pickup locations
- Information regarding storage space for personal belongings on the bus.
- Bus access for persons with disabilities or special needs
- Any special discounts afforded to Park visitors who use the bus system
- Contact address, telephone and Internet information

Ideally, due to the substantial amount of information that would be required in such a brochure, identical brochures would be produced in languages other than English.

Brochures should be attractive and inviting, encouraging users to pick one up. They should be available at hotels, resorts, gas stations, restaurants, visitor information centers and other visitor services throughout the Yosemite region, as well as locations within the Park. Brochures should also be available at bus stops and on YARTS buses. They should fit into a standard envelope so they can be mailed upon request. A supplemental information brochure could be developed for Yosemite employees.

Because a significant number of brochures will need to be printed, the per unit cost will be very low. A four-color (full color) brochure with a map and service information can be designed and translated for less than \$20,000. The printing costs for a brochure that is 11x17 unfolded is 20¢ per unit when large quantities are produced.

Telephone Information Service

Quality telephone information is necessary to inform customers about available services. Telephone service also allows for troubleshooting when necessary.

A toll-free telephone number should be established which would be staffed by trained operators. The telephone number should be identifiable. For example, a telephone number such as 1-(800/888/877)GO-YARTS includes the name of the service and is easy to remember. If a telephone number such as this example that "spells something" is selected, the numeric equivalent should be advertised as well.

Telephone operators should have abilities in other languages and be able to answer questions not only about YARTS bus services, but also about the parking areas which serve them and other regional transit services. They should have a good working knowledge of Yosemite National Park and should be able to refer callers to or connect them directly with Park services or facilities. The information database used by telephone operators might be connected to other information resources in the gateway communities such as local chambers of commerce. In addition, telephone operators could be connected to YCS to provide information on local bus circulation within the Park.

A menu of recorded information options could be provided to individuals who call. Recorded information can provide summaries of general topics such as schedule and fare information. Offering recorded information allows the telephone to be answered 24 hours each day so that an operator is not required during very late night hours. Telephone operator service should be available from at least one hour prior to the start of daily bus service until approximately one hour after the final bus run.

The telephone number should be displayed on buses, signs, in any print advertisements and on bus passes/tickets to ensure that individuals with questions about YARTS buses always have access to a number to call. In the brochure, the telephone number should be included along with the hours that operators are available. The brochure should also include the printed menu of recorded telephone information options.

Radio and YATI Information

Up-to-the-minute information on YATI kiosks will be especially useful for persons in the region. YATI should include traffic updates, road closures and YARTS parking lot capacity updates. Likewise, using a local AM radio station and posting road signs to advertise the station can be useful in providing traffic updates and encouraging travelers to reconsider their decision to drive into the Park. YARTS services should be described on the recorded radio announcement.

Public Relations Outreach

A public relations outreach effort should include letters and press releases to guidebook publishers (such as Fodor's, AAA and Michelin). Press releases should also be sent to environmental, retirement, consumer and travel organizations for publication in their newsletters and membership materials. Examples of such organizations include the American

Association of Retired Persons (AARP), Sierra Club, Consumer's Union and California Travel Industry Association (Cal TIA), among others.

Some newspapers and radio stations, as well as local cable television providers, desperately seek informative news items and are glad to make available news in the public interest. Many newspapers have reporters that write about travel issues or transportation. Some newspapers readily print press releases, word-for-word, that describe new bus services. Writing and faxing press releases does not have to be labor intensive and will be an excellent means of free advertising for YARTS.

Distribution of Yosemite Informational Material on YARTS Buses

YARTS buses should be furnished with a supply of Yosemite National Park informational brochures, including the materials provided to private vehicle drivers when they enter Yosemite's gates. In the initial stages of YARTS, it is recommended that bus riders be provided with a coupon or bonus package uniquely tailored to their needs that essentially serves as a reward for their decision to ride the bus.

Regional Advertising Campaigns

Advertisements should be designed not necessarily only to educate the traveler, but also to inform the many individuals residing in the Yosemite region about YARTS. The better the information the public has, the better they can inform travelers with whom they come in contact. Furthermore, if YARTS provides regional transit services that are not specific to the Park, these regional transit options should be promoted. Advertising opportunities include the following:

- radio stations
- local television stations and widely viewed cable television stations which offer local television commercials
- the sponsorship of transit education films on local cable access television,
- in community, school and church newsletters
- in playbills or programs distributed in community theaters or at sporting events
- partnerships with major non-Yosemite employers and activity centers
- sponsorship of and participation in special events such as organizing Try Transit Week Promotions, Earth Day Celebrations, etc.
- rider newsletters or brochures for nearby transit systems

Unique Bus Ticket

A bus ticket or ride voucher need not be a small piece of paper that's easy to misplace. YARTS is encouraged to develop a useful bus ticket that will not only be difficult to lose, but will provide information about the bus service and perhaps even serve as a memento of a visitor's time at Yosemite. Bus tickets or passes can come in many shapes and forms. For most of the alternatives listed, a single pass or ticket could be developed which would be valid for any day or time until stamped or hole-punched by a YARTS bus driver. A few examples of some inexpensive alternatives include the following:

- **YARTS Passport.** A small sleeve or folder would be presented to riders which would include a bus pass or tickets. The passport might also include the Yosemite informational brochure and coupons or discounts for Yosemite services and attractions. The Passport might also include a postcard, sticker, pen or other Yosemite souvenir item.
- **Yosemite Admission Card.** This is a card which identifies the bearer as a YARTS rider. The card would clearly display the dates that an individual may stay in Yosemite or for employees, an expiration date for the card. The card may also identify any other services which have been pre-paid by the traveler and can be used for discounts at certain local vendors. Riders would be required to present their card when boarding YARTS buses.
- **Wearable Bus Pass.** A wearable bus pass enables a visitor to keep his or her ticket on display at all time. The advantage of a wearable bus pass is that it can also be used as proof of payment for additional services purchased in advance (such as entry to a particular attraction). A wearable bus pass identifies the individual as a YARTS rider and can provide for unlimited on-and-off privileges if necessary. A wearable bus pass could be produced in any of three different ways: (1) An **adhesive bus pass** can be placed on a shirt or jacket. The advantage is that it is very prominent and easily identifiable. Unfortunately, due to visitors' varying levels of activity within the Park, an adhesive pass can also be very problematic when clothing is changed or physical effort results in water or perspiration-soaked clothing. For this reason, (2) a **pin-on/tie-on pass** may be more effective for Yosemite. Much like a ski resort lift pass, a safety pin or string loop allows it to be attached to any article of clothing and enables it to be removed easily. An alternative to these larger card or paper passes is (3) a **wristband pass**. The wristband would be date stamped and/or color coded for the day(s) the pass is valid. The advantage of the wristband pass is that it is non-transferable and nearly impossible to lose. Wristbands have proven very effective at major attractions and special events. All of these wearable bus pass alternatives

serve as excellent scrapbook keepsakes, reinforcing the marketing value of such passes.

Costs for producing tickets depends on the design and quantity. Depending on the ticket type, they could be produced on individual dot-matrix or laser printers using pre-printed stock (like a theater ticket) for about 40¢ per ticket. Pre-printed adhesive tickets and tyvek or plastic wristbands can be purchased for about 15¢ each.

Video or Audio Programming on YARTS Buses

One means of making the bus experience especially informative and enjoyable is to provide visitor video programming on the buses. Visitor information videos are shown on many tourist bus services. In Toronto, for example, shuttle coaches that provide service to the city's hotels from the airport present a video of local attractions.

A useful video would provide a brief introduction to Yosemite National Park, highlighting where the bus will stop and which amenities and attractions are available at each stop location. A video shown on the bus would both inform and excite tourists. A video can be used to make riders more cooperative by informing them of the rules for the orderly use of the YARTS buses. Television monitors can be installed on most over-the-road coaches.

An alternative to video programming is audio programming. An audio system can be installed on buses and would provide recorded visitor information. An advantage of audio programming is that information in languages other than English can be provided. Audio programming utilizing a compact disc system allows riders to select from multiple programs.

Audio and video programs can be costly to produce, though special arrangements might be made with volunteer groups to develop programming and reduce costs. It is recommended that any video or audio programming be carefully designed and professionally produced.

TARGET VISITOR MARKETS

Different types of travelers will be attracted to YARTS with varying degrees of success. A key component in the marketing of YARTS service is to identify the visitor markets that are most likely to respond to a marketing campaign. Although all visitors to Yosemite National Park should receive information about YARTS, specific campaigns should target likely users. Likewise, different visitor markets will have different expectations for the transit service. The markets with the greatest potential for "conversion" to YARTS are identified below:

Ecotourists

Ecotourists are interested in spending time in a natural setting and make conscious environmental decisions regarding their travel behavior. Many such tourists are very well-

informed on Park amenities including hiking areas. Most individuals in this group who spend the night in the Park camp using a tent. Some backpack in to Yosemite's wilderness areas. Ecotourists would likely delight in the option of transit service to their destination provided buses offer frequent service and easy connections to local circulator vehicles that serve important trailheads. Because these are individuals who are not going to need their vehicle within the Park, buses will offer them a tremendous level of freedom and flexibility.

Climbers and backpackers often have a large amount of gear that they must take with them which must be addressed in a targeted campaign. An effective promotion for this hiking market may be to include with a YARTS ticket a free or discounted shower, or discounts on camping or hiking equipment. In addition storage lockers within the Park might be provided. Articles in local and national environmental journals, such as the magazines of the National Park Conservation Association and Sierra Club, will stress YARTS as a "green mode" and an ecologically sound choice.

RV Travelers

RV travelers are likely to have more than one specific destination in mind when they travel to Yosemite. Many are taking long trips and stop at other scenic areas as part of their vacation. Others simply use the RV as a means of camping.

RV travelers are unlikely to make use of YARTS buses if they plan to spend the night in Yosemite National Park. However, those who are visiting for a day en route to another location or who park their vehicle at a campground outside the park could be encouraged to ride the bus into Yosemite. It is important to provide information that ensures these visitors that they can stay outside the Park and use convenient YARTS buses.

In addition, RV travelers are usually bringing with them the highest number of personal belongings of any of the target market groups. YARTS may provide just the opportunity RV travelers need to leave many of their belongings behind and explore Yosemite National Park with a lighter load. A targeted campaign for RV travelers would encourage them to leave their vehicle outside the Park and avoid the narrow roads, significant grades and difficult driving into the Park. Other important issues for this group include convenience of RV parks to YARTS parking areas and that designated RV parking spaces are available at YARTS lots. Local campgrounds should distribute information about YARTS with their own marketing information. Because YARTS enables RV travelers to leave belongings behind when they visit Yosemite, promotions such as those that would highlight the vast array of dining options and provide for discounted meals in the Park may be an added incentive for using the bus. In addition, by locating stops near major campgrounds a convenient connection can be marketed.

Senior Citizens

Seniors may be interested in riding YARTS to avoid the difficult driving required for Park access. Seniors would need to be assured that they can access all major Valley destinations on YARTS and that they will not be required to do substantial hiking if they prefer to be dropped at their ultimate destination. Informational materials should note that Yosemite is an “especially convenient, enjoyable Park to visit because of an excellent bus system that allows drivers to park outside Yosemite’s boundaries.”

Offering senior discounted bus fares, maintaining convenient connections, describing the quality of comfort on YARTS (“deluxe buses”) and spending money on amenities such as benches and shelters at bus stops will be important to attract and satisfy senior riders. Marketing through the Park’s Golden Eagle program should be emphasized.

International Independent Visitors

A typical visit to the western United States for many international visitors involves flying into one of two major airports (Los Angeles International or San Francisco International), renting a car and driving a route via Yosemite to the other major airport, often with a stop in Las Vegas. International visitors are often surprised to find that regional transit services are not available in the Yosemite area. Because transit is readily available in many of the visitors’ home countries, taking the bus will not be a major new idea. Marketing to foreign tourists will require special attention to languages and the information outlets normally used by this market group, such as airlines, foreign travel agents, international guidebooks and travel web sites.

Many of these travelers make all of their reservations in their home country and receive vouchers for hotel stays and transportation services in advance of their departure from their home country. Selling bus vouchers as part of a tour package along with providing brochures and information in other languages will be a useful means of addressing the needs of these travelers.

Air and Rail Passengers

Air and rail passengers purchase tickets in advance for their trip to Yosemite. Many Amtrak rail passengers use existing public transportation services to make their trip from an Amtrak depot (such as Merced) to Yosemite National Park. Air passengers, on the other hand, may use the VIA Adventures service to Yosemite available from Fresno, but many rent a car to reach the Park. YARTS can provide convenient transit for both groups.

Airlines and Amtrak should be included in YARTS marketing efforts. Just as with international visitors, it will be useful to market YARTS transit services to travel agents and airlines that design fly-drive vacation packages. YARTS should supply the information brochures to car

rental agencies in Fresno, San Francisco, Las Vegas, Los Angeles and Sacramento. In addition, information should be provided to Amtrak customer service, so agents can inform passengers making rail reservations.

Air and rail travelers are less likely than any of the other target markets to have a significant number of travel and outdoor supplies with them. Therefore, discounts for meals, food, gifts and equipment rentals are likely to have an impact on these visitors' mode choice.

Yosemite Park Commuters

Yosemite Park employees represent one of YARTS' best potential ridership groups. They live in the region, they are familiar with congestion and parking lot capacity issues and they work varied schedules that could be accommodated by YARTS.

Involving Yosemite employees in the YARTS planning process has been a useful means of getting their interest and input. Some employees have actively participated in workshops and have made excellent suggestions regarding the manner in which YARTS could operate. By keeping them updated throughout the planning process, YARTS is likely to draw their interest. As soon as bus schedules are available and employee fare policy has been set, the information should be immediately provided to employees. Incentives are critical to changing employee travel behavior. The program currently being considered by the Park service addresses many typical concerns about transit service by employees. Any commute incentives program must be marketed as a total program rather than in individual pieces.

Local Area Lodgers and Campers

Even though it is a mode of public transit, the buses and monorail at Disney World are highly successful not only because few options exist for parking and getting to the front gate of each of Disney's parks, but also because they are part of the experience of visiting Walt Disney World and are marketed as such. Likewise, YARTS should be showcased as a convenience that is integral to the Yosemite visit. Visitors staying overnight in gateway communities who are returning to their overnight accommodations may be encouraged to take YARTS since they already have convenient and secure parking for their personal vehicle. Lodging reservationists should describe their proximity to the nearest YARTS pickup location and also provide information about bringing personal belongings into the Park on YARTS vehicles. If possible, they also should encourage pre-payment of YARTS tickets. YARTS information should be included in all material sent by local hotels/motels. Confirmation letters should always include a YARTS brochure. Hotels could be given incentives for selling pre-paid YARTS tickets.

Key elements of a marketing plan targeted at this group includes convenient stop locations, pricing and storage for family gear. Amenities such as bicycle racks on the buses, secure

storage areas within the Park (such as lockers) and easy transfers to Park circulator buses are needed. Promotional ideas include discounts for equipment rentals and dining services.

THE THREE STAGES OF VACATION PLANNING

Travelers are only able to absorb and react to certain types of information at different stages in their vacation planning. For example, an individual making the initial decision to visit Yosemite will not be concerned with the logistical details of YARTS buses, whereas someone making reservations and setting an itinerary will have a greater interest in parking areas and bus departure schedules.

The marketing program presented in the previous section outlines marketing “actions” to be implemented. The following discussion presents the three stages of an individual’s decision-making process for a visit to Yosemite. This information clarifies the level of outreach required of YARTS by visitors. The three stages of vacation planning are described below:

Stage 1: Decision to Visit Yosemite National Park

Stage 2: Advance Trip Planning

Stage 3: On-Location Decision Making

Stage 1: Decision to Visit Yosemite National Park

This is the investigative stage in an individual’s vacation planning process. For travelers at this stage, it should be the goal of YARTS to ensure that a basic description of bus service is provided and linked to all general Yosemite National Park marketing information. The option of YARTS must be integrated into the overall idea of a Yosemite vacation at this early stage.

While many individuals will have traveled to Yosemite before, others will be making a first-time travel decision to visit Yosemite. The decision to visit Yosemite hinges on several variables such as the type of vacation desired, estimated vacation expenses, the ease of travel to the destination and the proximity to other attractions along one’s trip itinerary. The most useful information about YARTS that can be provided at this stage is the fact that it exists:

Gone are the days of traffic congestion and limited parking at Yosemite. YARTS is a comfortable and convenient public bus service sponsored by Yosemite National Park that provides access to all key destinations in the Park. Ample day and overnight parking is available at designated Yosemite National Park visitor lots throughout the region.

For travelers at this stage, the focus of marketing should be to present very general information about YARTS, included in all Yosemite “overview” marketing materials, in brochures and

guides published by local visitors' bureaus throughout the region, in travel magazines and newspapers and on Internet informational website "home pages." All mailings done by the National Park Service and/or its concessionaire should include a basic YARTS brochure. Both the **yosemite.com** and **yosemite.org** websites should include basic YARTS information for those who "surf" as part of their initial planning.

Stage 2: Advance Trip Planning

While YARTS should provide notice of its service to travelers at Stage 1 in their trip planning process, practical detail should be provided in Stage 2. Once a traveler makes a decision to visit Yosemite National Park, he or she will require more information about the YARTS service. The more positive and useful the information that is provided about YARTS throughout an individual's trip planning process is, the more likely it is that he or she will be prepared to ride the bus to the Park and will look forward to using it.

At this stage, visitors are making lodging reservations, mapping trip itineraries and planning day-to-day activities during their stay in the Yosemite area. These visitors must be provided with basic information regarding parking areas, costs, hours of service, bus capacity for personal belongings and a telephone number and Internet web site where this detailed information can be found. Again, information that describes the benefits to the traveler, the Park and to the environment should be explained.

Unless they have heard about YARTS in news stories or from other travelers, those who are repeat visitors to the region will likely do less trip planning than those scheduling a first-time visit. It is important that all visitors, particularly during the initial stages, be provided ample information about YARTS. Stage 2-required outreach should target existing informational publications on the region, local tourist newsletters and newspapers, as well as motel and lodging guides. Hotels should inform all guests about the service when they are making reservations. For reservations made through toll-free numbers, the YARTS information telephone number should be provided in the hotel database listing so that reservationists can inform callers about the hotel's proximity to designated parking lots.

General telephone and Internet information are important at this stage in the trip planning process. YATI is likely to be the most valuable Internet resource for YARTS service. YARTS should develop a comprehensive information page for the YATI system. The kiosk/web page should include maps, service information, service changes, special events information, etc.

One incentive for using YARTS that could be useful for travelers at this stage in their plans would be a pre-paid bus ticket discount. Individuals choosing to pre-pay for YARTS bus tickets could do so by mail, Internet or by telephone when making lodging reservations. Offering the pre-pay option both educates visitors about YARTS and allows them to fully incorporate YARTS into their travel plans.

Stage 3: On-Location Decision-Making

Information provided to travelers during Stage 2 of their trip planning process should sufficiently prepare them for the YARTS service. Based on this information, most visitors should have a general understanding of what to expect from YARTS and how to use it. Regardless of the amount of advance information available about the bus services, some individuals will arrive in the Yosemite region without knowledge of the YARTS buses. Information resources required at Stage 3 must include a combination of advertising outreach efforts, quality detailed informational materials, an operational environment that is user friendly and personalized incentives for riding YARTS buses. By implementing the marketing recommendations listed in the beginning of this chapter and providing incentives, such as those recommended for specific target markets, all of the resources needed for Stage 3 decision-making will be in place.

EVALUATION PROGRAM

An evaluation program is useful for determining the effectiveness of the YARTS marketing effort. Evaluating the marketing program enables YARTS to re-evaluate marketing strategies and identify new ways to proceed.

Even the most successful businesses will admit that some marketing is a trial-and-error process. Evaluating marketing efforts enables YARTS to enhance the most successful efforts and shift resources away from those marketing efforts that have either reached their greatest success or require a change in emphasis. The following means of evaluating marketing efforts would be effective for YARTS:

Conducting Intercept Surveys at Specific Locations in Yosemite National Park

Surveys can be conducted at the Visitors' Center, Yosemite Lodge, Curry Village and other popular visitor locations. YARTS staff or a consultant could conduct the intercept surveys. These surveys would be designed to gather information from a mix of YARTS users and non-users. An intercept survey can also help to evaluate logo recognizability, the effectiveness of the advertising efforts, how far in advance of their trip to Yosemite they were aware of YARTS, how individuals traveled to the destination, etc.

Conducting an On-Board Bus Survey

On-board bus surveys are effective in evaluating the overall impact of the marketing campaign, determining how ridership has responded to the marketing efforts and can provide information useful for developing new marketing schemes. Surveys would be distributed to passengers who would in turn complete them on the bus and return them to a designated surveyor or the driver.

Conducting Focus Groups/Rider Workshops

Focus groups or YARTS rider workshops can also be used to understand the success of marketing efforts that have already been implemented. Focus groups can be instituted to prioritize marketing products, refine the list of best avenues for marketing, and gauge responses to a range of marketing ideas. Focus groups are a good way to get this information because they allow for synergism, cumulative interest, contagious enthusiasm, anonymity and spontaneous reaction to ideas.

The results of the evaluative effort can be used to define future marketing programs.

SUMMARY

A continual program of education and marketing is essential if YARTS is going to be a successful strategy for transportation to Yosemite National Park. This chapter describes marketing strategies that can be implemented for transit in the Yosemite region.

The marketing program presented in this chapter provides recommendations for transit system identity, signage and informational resources. Informational resources include brochures, passenger tickets, radio and Internet information, a YARTS telephone information system and on-board information/entertainment video or audio programs. A final key element of the marketing program is the targeting of special sub-populations for specific marketing efforts. These sub-populations, called target markets, include the following:

- Ecotourists
- RV Travelers
- Senior Citizens
- International Independent Visitors
- Air and Rail Passengers
- Yosemite Park Commuters
- Local Area Lodgers and Campers

A key strategy for YARTS is to understand the type of information that travelers require during each stage of their travel decision-making process. Marketing should reach those travelers at the very early stages of their travel plans while providing detailed information for visitors in the Yosemite area.

At the first stage in an individual's trip planning process, the goal of YARTS should be to ensure that a basic description of the availability of bus service is tied to all general Yosemite

National Park marketing information. At Stage 2, when travelers are making detailed plans for their vacation, more information about YARTS is required. At this stage, visitors must be provided with basic information regarding parking areas, costs, hours of service, bus capacity for personal belongings and a telephone number and Internet web site where this detailed information can be found. At the final stage in their travel decision-making process, the visitor is in the Yosemite region and is making minute-to-minute decisions regarding activities. This on-location decision-making stage requires transit system "presence" including clear indicators of system identity, signage and informational resources.

An essential but often overlooked step in the marketing process is to conduct an evaluation program to determine the effectiveness of the YARTS marketing effort. Recommended means of evaluating marketing efforts include intercept surveys in the Yosemite region, on-board bus surveys and focus groups. Information gathered from an evaluation enables the fine-tuning of advertising and information strategies. Better cost management occurs when less effective marketing efforts are scaled back and the most beneficial means of outreach are expanded. While this chapter provides an introduction to general marketing concepts for YARTS, the next step is to develop a few specific comprehensive marketing actions that will be undertaken.

CHAPTER 11: FINANCIAL PLAN

This chapter outlines a financial plan for YARTS services. The four major objectives of this financial plan are:

1. To identify costs and funding to pay for all planning and implementation activities for each phase of the recommended alternative. This includes implementation and oversight of the first year of the demonstration project scheduled for the summer of 1999.
2. To estimate total operating costs for each phase of the preferred alternative. This includes operating and maintenance (O & M) costs for each phase (already estimated in Working Paper #15), and adds administrative and marketing expenses.
3. To develop a short-term funding plan to pay for Phases 0 and 1 capital and operating costs.
4. To develop a longer-term strategy for funding capital and operating costs associated with Phases 2 and 3.

The financial plan begins with a summary of the operating plan for each phase by providing a breakdown of the projected operating costs, ridership estimates and passenger fare revenues. Each phase is presented as a snapshot in time and is not intended to necessarily coincide with a specific year. It is assumed, however, that Phases 0 and 1 would be implemented within the next five to six years and that implementation of Phases 2 and 3 would not occur until at least 2006 or 2007. Based on these general assumptions, a detailed funding plan covering operating and capital costs is proposed for the next six years. A longer-term funding strategy is then presented for Phases 2 and 3. It should be noted that more developed phases could be implemented on an accelerated timetable if conditions warranted more service and if funding was available for infrastructure development and bus procurement.

PLANNING AND IMPLEMENTATION ACTIVITIES

In FY 1998/99, an implementation action plan will be developed for the demonstration project. The details of the demonstration project are described in Chapter 7. The planning and implementation activities associated with the demonstration project are to be funded with a FTA grant MCAG has secured for this purpose. This \$500,000 discretionary grant is intended to be drawn down in FYs 1998/98 and 1999/2000.

Since planning, implementation and other administrative activities will be ongoing, there is a requirement to secure funding for this purpose in future years. This financial plan

demonstrates that there appears to be adequate grant funding to pay for these activities during the next five years.

SUMMARY OF OPERATING PLAN

A summary operating plan for Alternative 2, the Phased Transit Service Alternative, is presented in Figure 11-1. The major assumptions in developing the operating plan are summarized below.

1. Operating and Maintenance Cost

For each alternative, the operating and maintenance (O & M) cost was estimated based on the proposed level of service. O & M costs are assumed to be \$55 per hour consistent with existing private transit operators in the area.¹ For comparative purposes, we assume that the operating cost for service will not change when YARTS begins to own buses, beginning with Phase 2. During the early phases, private operators are assumed to provide their own vehicles for the service, and this cost is included in the O & M cost estimate.

2. Marketing Costs

Marketing costs were added to the O & M costs for each phase. Since marketing is a critical element of YARTS, it is imperative that we adequately consider the cost to market YARTS in all phases. Marketing, in this case, is broadly defined, referring to public information, education, and community outreach. It includes the development of marketing materials such as brochures and flyers, to sponsoring educational forums, to improvements in YATI. (*Refer to Chapter 10 for more details on the marketing plan*).

Marketing costs in Phase 0 and 1 are estimated at \$250,000 per year. In the second and third phase, annual marketing costs are estimated at \$1.0 million. This plan assumes that a major element of the marketing costs would consist of personnel costs for the labor intensive effort to educate "front-line personnel" in the hospitality industry about YARTS service. Although not shown in Figure 11-1, marketing costs increases tend to be "abrupt" rather than gradual as new campaigns are developed. As service levels increase and YARTS moves from one phase to another, there would be a one-year spike in marketing costs followed by a gradual decline until YARTS jumps to the next phase. The fluctuation in marketing costs is because of the necessity to "ramp up" for new services by designing and distributing new informational brochures, conducting marketing campaigns and hosting educational forums.

¹ Nelson\Nygaard, Working Paper #12, Refined Options, March 1998.

3. Administrative Costs

The administrative costs consist of day-to-day administration including planning, budgeting, grant preparation and reporting, as well as oversight and monitoring of contract operators. This plan assumes that the current informal YARTS organizational structure will take the next step and form a Joint Powers Authority.

In Phase 0, the administrative costs are estimated at \$200,000 per year. These expenses assume \$150,000 in staff time plus \$50,000 in miscellaneous direct expenses. Moving from Phase 0 to Phase 1, the administrative costs are estimated to increase by \$50,000 to account for additional field personnel to oversee the contract operation. In subsequent phases, the increase in administrative costs account for additional support personnel and office space. While administrative costs will increase with each phase, the percentage of administrative costs compared to total costs will actually decrease over time. As O & M costs are increasing with each phase, the cost to administer and monitor the service does not proportionately increase. For example, administrative costs are estimated at \$200,000 in Phase I and represent 18% of the total operating costs whereas in Phase 2 administrative costs represent 12% of the total costs even though service levels more than double.

4. Costing in Current (1998) Dollars

All costs shown in this financial plan are in current, 1998 dollars, to allow for reasonable comparisons between phases. The timing of actual implementation will affect actual costs, as the affect of inflation is not considered. This will influence both capital and operating costs.

5. Farebox Recovery Estimates

The fare structure is designed to offer reasonably priced fares to attract ridership, and to cover the majority of operating costs. Farebox recovery projections are based on the proposed fare structure which results in average fares that range from \$9 per person round trip to as much as \$25 per person round trip, depending on the corridor and the distance of the trip.

In Phases 0 and 1, we have included a low and high estimate of passenger fares because it is very difficult to project passenger revenues with a high degree of accuracy. The fluctuation in passenger fares is largely dependent upon the level and usage of discounted fares. As an example, the average fare per passenger in Phase 0 ranges between \$9.90 and \$12.78 resulting in a farebox recovery ratio between 53% and 69%. The farebox recovery ratio is calculated by dividing the projected passenger fares by the total operating costs, rather than limiting it to the O & M costs. If the farebox recovery calculation was based solely on the O & M cost, the ratio would be higher. It is worth

FIGURE 11-1
OPERATING PLAN FOR RECOMMENDED PHASE TRANSIT SERVICE ALTERNATIVE (PHASED TRANSIT SERVICE)

Phase	Level of Service (Service Hours) (1)	O & M Cost (2)	Marketing (3)	Administration (4)	Total Operating Costs	Estimated Ridership (5)	Fare Revenues (6)		Farebox Recovery Ratio (7)	
Phase 0	12,400	\$682,000	\$250,000	\$200,000	\$1,132,000	61,050	\$605,000	\$780,000	53.4%	68.9%
Phase 1	28,010	\$1,540,550	\$250,000	\$250,000	\$2,040,550	97,300	\$1,270,000	\$1,670,000	62.2%	81.8%
Phase 2	124,500	\$6,847,500	\$1,000,000	\$625,000	\$8,472,500	838,700	\$12,070,000	\$12,070,000	142.5%	142.5%
Phase 3	248,700	\$13,678,500	\$1,000,000	\$700,000	\$15,378,500	1,421,500	\$21,630,000	\$21,630,000	140.7%	140.7%

(1) Level of Service by phase are consistent with revenue service hours by phase in Nelson\Nygaard's Refined Options, Working Paper #12

(2) Operations and Maintenance Costs are estimated at \$55/hour based on discussions with private transit operators in the area.

(3) Includes marketing, public information, education, and community outreach activities to promote YARTS services.

(4) Includes all administrative functions such as contract oversight, service monitoring, planning, budgeting and grant application and reporting.

(5) Ridership figures from Nelson\Nygaard's Refined Options, Working Paper # 12, pages 20 - 29.

(6) Fare Revenues from Nelson\Nygaard's Refined Options, Working Paper # 12, pages 20 - 29.

(7) Calculated by dividing fare revenues by total operating costs.

All costs are in 1998 dollars (\$)

noting that the initial fare structure proposed for Phase 0 may require refinement and adjustment after the initial demonstration period. Depending upon experience during the first year of operation, fares may have to be increased or decreased to minimize the risk for the contract operators. The goal is to minimize risks with each phase.

SHORT-TERM FUNDING PLAN

The YARTS service cannot move forward nor can the capital projects be built without adequate funding. One of the primary objectives of this funding plan is to minimize the need for on-going subsidies through private sector involvement and to leverage state and federal funds to pay for capital investments.

Although there are no fixed, required dates for moving from one phase to the next, this plan assumes that YARTS will move forward and operate Phases 0 and 1 service levels within the next five years. Figure 11-2 combines operating costs for Phases 0 and 1 based on the above assumptions and capital costs for each phase described in Chapter 9. To understand the costs YARTS would likely incur in a specific year, the capital costs have been programmed by year to show when capital investments would be required. Figure 11-2 shows that YARTS would be operating under Phase 0 and 1 service levels between 1999 and 2004, yet in FYs 2003 and 2004, YARTS would begin to incur costs for parking facilities for Phase 2 implementation. There are no bus purchases proposed during this six year time frame, though this could be necessary if Phase 2 is accelerated.

Figure 11-2 shows the total operating cost and capital costs separately for the next six years. YARTS would incur capital costs in FY 1998/99 to begin design, engineering and environmental work on staging areas and to procure transit-related amenities. Operating costs for Phase 0 are projected at \$1.1 million for FYs 2000 and 2001. Service levels are projected to more than double in Phase 1 due to the extended days of operation and the additional service to handle peak day volumes. The cost for Phase 1 service will be about \$2.0 million and is assumed to remain relatively constant for the next three years.

The middle row of Figure 11-2 called "Total System Cost" combines capital and operating costs and shows total system expenses for the next six years. The bottom portion of the figure identifies the proposed revenue sources to cover YARTS capital and operating expenses within the next six years. Each revenue source is defined below along with the required funding levels.

STIP Funding

SB 45 became effective in January 1998 and consolidated numerous funding programs which were previously programmed as part of, or outside, the STIP process. The two major programs consist of the Regional Improvement Program (Regional Choice) which account for 75% of

the statewide funds, and the Interregional Improvement Program (IIP) which make up the remaining 25% of statewide funds.

FIGURE 11-2
SHORT-TERM FUNDING PLAN

	1998/99	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
COSTS						
<i>Capital Costs</i>						
Parking Facilities (1)						
Pre Eng./Design/Environmental	\$1,139,000	\$561,000			\$1,644,000	\$1,644,000
Construction		\$700,000	\$1,100,000	\$1,100,000		
Other Capital Improvements	\$186,300	\$159,300				
Subtotal Capital Cost	\$1,325,300	\$1,420,300	\$1,100,000	\$1,100,000	\$1,644,000	\$1,644,000
<i>Operating Costs</i>						
Phase		<i>Phase 0</i>	<i>Phase 0</i>	<i>Phase 1</i>	<i>Phase 1</i>	<i>Phase 1</i>
O & M Costs (2)		\$682,000	\$682,000	\$1,540,550	\$1,540,550	\$1,540,550
Administration/Marketing	\$450,000	\$450,000	\$450,000	\$500,000	\$500,000	\$500,000
Subtotal Operating Cost	\$450,000	\$1,132,000	\$1,132,000	\$2,040,550	\$2,040,550	\$2,040,550
Total System Cost	\$1,775,300	\$2,552,300	\$2,232,000	\$3,140,550	\$3,684,550	\$3,684,550
REVENUES						
IIP Funds (1998 STIP)	\$1,325,300	\$1,400,000				
IIP Funds (2000 STIP)			\$1,100,000	\$1,100,000		
IIP Funds (2002 STIP)					\$411,000	\$411,000
Livable Communities Initiative (3)					\$822,000	\$822,000
Private Contributions (4)					\$411,000	\$411,000
FTA Section 3 Discretionary Grant (5)	\$200,000	\$300,000	\$200,000	\$250,000	\$150,000	\$150,000
Caltrans Research/Planning Grant (6)	\$200,000		\$75,000	\$120,550	\$200,000	\$200,000
YATI Grant (7)	\$50,000					
Passenger Fares (High Estimate)		\$780,000	\$780,000	\$1,670,000	\$1,670,000	\$1,670,000
National Park TDM Grant (8)		\$72,300	\$77,000			
Local/ Other Funding Contributions (9)					\$20,550	\$20,550
Total System Revenues	\$1,775,300	\$2,552,300	\$2,232,000	\$3,140,550	\$3,684,550	\$3,684,550

- (1) All parking facility costs for FYs 1999 through 2002 for Phases 0 and 1. For Phase 2, preliminary engineering/design and environmental are included in FYs 03 and 04.
- (2) Assumes no operating costs in FY 1998/99.
- (3) Assumes federal funds made available through the Livable Communities Initiative to pay for parking facilities
- (4) Assumes private sector funds are available for parking facilities.
- (5) \$500,000 in existing FTA Grant drawdown in two years. Assumes MCAG is successful in securing future FTA Discretionary Grants.
- (6) \$200,000 in existing Caltrans Grant for FY 1998/99. Assumes MCAG is successful in securing future Caltrans Discretionary Grants.
- (7) Assumes \$50,000 of the \$275,000 YATI grant will be used for marketing YARTS.
- (8) Assumes that \$150,000 would be available over a 2 year period to pay for Park employees YARTS passes.
- (9) These contributions could come from Park Service, private sources or other. Fund sources would be determined by individual counties.

The short-term financial plan does *not* propose use of Regional Choice funds because it is assumed that each YARTS member county relies on these funds for their own internal high priority capital improvement projects. The plan builds on the YARTS success in securing IIP funds for the 1998 STIP. In the first two years of this financial plan, the \$2.7 million in IIP funds programmed in the 1998 STIP will be used to fully fund the preliminary engineering, design and environmental review for the initial YARTS staging areas. These funds are intended for capital or construction projects only and must be fully obligated by the year 2000. In future years, it is assumed that YARTS will continue to be successful in securing IIP funds given YARTS high statewide profile and Caltrans keen interest in YARTS. The financial plan assumes that the 2000 State Transportation Improvement Program (STIP) will commit about \$2.0 million for construction of the parking facilities funded in the 1998 STIP. In the last two years of this financial plan, IIP funds would be made available at reduced levels to help leverage federal funds (See following discussion).

Livable Communities Initiative

The Livable Communities Initiative, a program of ISTEA, is designed to strengthen the link between transit planning and community planning. This initiative is intended to promote the development of transit facilities and services that meet the needs of communities, and are linked to land use planning and design in a way that encourages transit-pedestrian-bicycle access. A parking facility would be considered an eligible project under this initiative, particularly if it incorporates other community or Park services or enhancements. Favorable links to this project would include customer information services and special provisions for elderly persons and persons with disabilities.

While the Livable Communities Initiative is not tied to a specific fund source, there are several federal funding sources which could be available under this program. These include the Transit Formula Block Grants, Transit Discretionary funds, the Surface Transportation Program, and Congestion Mitigation Air Quality (CMAQ) funds. As an example, the Orlando Park and Garage and Child Care Center received funding through the Livable Communities Initiative. This project is a 515 parking space facility that incorporates a child care center, restaurant and offices of the City's Parking system. FTA funded 80% of the parking garage costs and the costs of the land for the child care center. The City provides free shuttle bus service to downtown employment centers.

A parking facility with transit connections is an excellent candidate for this type of funding, particularly if a funding package includes a public/private partnership. As YARTS begins to develop parking facilities for Phase 2, YARTS is encouraged to develop a funding package that incorporates federal, state and local sources including private sector contributions. For the \$3.2 million required for parking facility design in FYs 2003 and 2004, this plan assumes that YARTS is able to secure a federal grant to pay for 50% of the costs, with matching funds from IIP funds and private contributions.

Private Contributions

Private contributions can take many forms. Local merchants and businesses are often interested in helping to support transportation improvements, particularly if the contributions can bring additional tourists to the area. In the gateway communities there are opportunities to work with the tourist industry to generate private contributions. Tourist-related businesses such as hotels and tourist attractions may be willing to become a partner in funding a regional transit service if their contributions were tied to marketing services or for one-time capital improvements such as passenger shelters or benches. Private contributions can also take the form of donated properties for development of staging areas or businesses may be interested in leasing space in a public facility which has the potential to generate revenues for YARTS. Another innovative private funding strategy is to secure corporate sponsorships. For example, a company could pay for constructing a parking staging facility and acquire advertising rights. This financial plan assumes that about \$800,000 in private contributions will be generated to support parking facilities in Phase 2. Since this type of arrangement requires considerable negotiation, YARTS is encouraged to begin this process as soon as practically possible.

FTA Section 5309 Discretionary Grant

The Merced County Association of Governments (MCAG) has secured \$500,000 from a FTA Section 5309 Grant. The grant was initially intended to cover costs incurred for FY 1997/98 and MCAG now expects these funds to be available in FY 1998/99. A large percentage of this grant is intended for planning YARTS Phase III. This plan assumes these funds would be used to support planning and implementation activities associated with the FY 1998/1999 and FY 1999/2000 demonstration project. The plan also assumes that MCAG is successful in securing additional federal discretionary funds in the amount of \$750,000.

Caltrans Research/Planning Grant

The Merced County Association of Governments (MCAG) is anticipating approval of a Caltrans Planning Grant in the amount of \$200,000. These grant funds will be used to support administrative and planning activities associated with the FY 1999/00 demonstration project and Phase 0. MCAG is encouraged to apply for future planning and research grants. This plan assumes that MCAG successfully secures an additional \$600,000 in state planning and research grants.

Caltrans Marketing Grant for YATI

This is a \$275,000 grant MCAG was awarded to continue YATI operations and improvements. Since YATI is intended to improve the public information network about Yosemite National Park and its environs, it is reasonable to assume that a portion of these grant funds could be used to focus YARTS marketing. The drawdown of these grant funds would occur in FY 1999 and would be used for marketing YARTS service utilizing YATI during the demonstration phase.

Yosemite National Park Grant

The National Park Service is in the process of applying for federal discretionary funds to pay for a series of employee transportation demand strategies for Park employees. The funding request would cover several different components including:

- An Employee Transportation Coordinator
- Funds to pay for one years worth of YARTS passes
- Guaranteed Ride Home
- Ride Matching for carpools and vanpools

It is our understanding that the Park Service is seeking funding for an employee transportation demonstration program. This financial plan assumes that about \$75,000 per year would be available to pay for YARTS passes for Park employees. The remaining funds would be used for other TDM programs and services.

Other Funding Contributions

This plan could require other financial contributions from a variety of sources, particularly if MCAG is unable to secure federal and state discretionary grants. The funding source identified as "local/other contributions" could represent any mix of funding from the National Park Service (described below), private contributions, or from the jurisdictions themselves. To this point, YARTS member counties have contributed only in-kind services directly to YARTS and the amount of spending in each county for transit services varies significantly by county.

In the financing plan presented on Figure 11-2, the total amount of local funds required from all potential sources is about \$20,000 in FYs 2003 and 2004 and could be split between the member counties. The funding split or formula would be determined by the YARTS Board of Directors and could be an equal distribution among the counties, the park service and other sources, or based on a mutually agreed upon formula.

Any funding required from local jurisdictions could come a variety of sources such as Transportation Development Act (TDA) funds, State Transit Assistance (STA) funds, "Regional Share" through the Regional Improvement Program (RIP) funds, Transient Occupancy Tax (TOT) receipts or any other local fund source. The advantage to this approach is that it allows each jurisdiction receiving benefit from YARTS to determine how it will share in its long term success.

Longer term financing strategies for YARTS may require locally generated contributions if YARTS is unable to secure federal and state discretionary grants.

LONG-TERM FUNDING STRATEGY

Through MCAG's success in securing state and federal discretionary grants, YARTS is reasonably assured that it can pay for its capital requirements and administrative costs over the next six years. Beginning in 2005 and beyond, there will be significant capital investments required, from acquiring transit vehicles to parking facility construction costs. While the emphasis of this financial plan has been on the first six years, the following section identifies longer-term funding opportunities. Given the lead time required for some of these funding opportunities to be realized, YARTS should be pursuing these funding opportunities as soon as possible. While there will definitely be future opportunities to secure federal and state funds, the emphasis of this section is on the potential to generate new funds through the National Park Service and Yosemite National Park.

Park-Related Revenues

Parking User Fees

Currently there is no charge for overnight parking within the Park. There are formal parking spaces located at several hotel facilities and other locations, as well as informal parking spaces scattered throughout the Park. The implementation of a YARTS service will result in different levels of access for overnight guests and day users. To "compensate" for this inequity, parking charges are a logical alternative. They also represent a completely new source of revenues, which may be dedicated to the transit service. There are, however, current limitations on how these funds could be used.

Parking fees have the potential to generate a considerable amount of revenue even if a small amount were charged for overnight parking.² Adding a parking surcharge limited to Valley lodging has the potential of generating approximately \$2.7 M per year assuming 2,401 overnight units in the valley. If a parking surcharge were imposed for lodging throughout the entire Park about \$3.2 M could be generated annually. Of course, if fees were added to any other parking within the Valley the amount generated would increase substantially.

This concept represents the single most significant new source for on-going revenue generation. It is also consistent with a policy that encourages transit use and provides greater equity for transit passengers.

It should be noted that current restrictions may limit the use of these funds for services outside of the Park. Even with this limitation, the fact that YARTS will bring visitors directly to the Valley requires that a substantial portion of the YARTS service occur inside of the park. Integration with the shuttle system would further link YARTS into the Park, minimizing this concern.

² Nelson\Nygaard, Working Paper #4, Funding Opportunities, January 1998.

Concessionaire Fees

In October 1993 a new concessionaire agreement was signed between a private vendor and Yosemite National Park. The contract is in the 4th year of a 15 year contract. A special feature of this agreement is setting aside 4 ½ % of the concessionaires's gross receipts in a capital improvement fund.³ These revenues are intended to fund specific projects, primarily rehabilitation and upgrades to the concessionaire facilities located through the Park. It may be possible to broaden the list of eligible projects and include YARTS as a recipient of these revenues. If a contract amendment is required to change the list of eligible projects, it may not be worthwhile or practical to pursue this option as a means of generating additional revenues for YARTS transit services.

National Park Service Appropriations

One of the proposed revisions under ISTEA Reauthorization is the increased flexibility in how National Park Service appropriations are used. Although the Department of Transportation does not authorize General Park Service Appropriations (The Dept. of Interior is the federal agency which authorizes the national park funds), it will for the first time allow these funds to be used outside of federal park lands. This is a significant departure from current federal law which requires Park funds to be spent on projects/programs located within park boundaries. The primary objective of this proposed change is to allow projects that benefit the Park Service to be 100% federally funded. For example, projects such as bike trails or parking staging facilities located outside of federal park lands, could receive 80% funding from a federal capital grant and 20% match from the National Park Service appropriation. This could greatly benefit YARTS by eliminating the need for the local YARTS counties to provide the required match.

It is important to emphasize that increased funding flexibility may benefit the Park by allowing for creative strategies to pay for its transportation improvements. However, without increasing funding levels, the Park will continue to be limited in its ability to pay for a variety of programs and services, including a regional transit service.

Federal Lands Highway Program

The Federal Lands Highway Program is an existing program under ISTEA which provides \$84 million per year to the National Park Service. These funds are divided among the national parks and the funds are typically used for road maintenance. These funds could be used both for both road improvements and YARTS transit service. The Department of Transportation proposed to increase this fund source by about \$120 million per year, of which \$120 million would be used to maintain streets/roads and the additional monies would be used for alternative transportation projects. Although this may not generate a significant increase for Yosemite National Park, the incremental increase could be dedicated for YARTS services.

³ DRAFT Yosemite Valley Implementation Plan, United States Department of the Interior, National Park Service

Department of Transportation Funds for the National Park Service

There has been discussion at the federal level with the Department of Transportation to create a new program to address the transportation needs for the National Park Service.⁴ The preliminary discussion has focused on developing a special program which would provide federal funds for capital and operating purposes to improve the transportation network within the national parks. Although there is no proposed legislation as of this writing, this concept is to create a new transportation fund source that would be available for all national parks. The funds could be distributed by the Department of Transportation to individual parks on a priority basis or be allocated through a pre-determined formula basis. Given the high profile of the YARTS system and the MOU focusing on Yosemite National Park, YARTS has a good potential to receive at least some of these funds. YARTS is encouraged to promote this type of legislation and work with other national park associations to pursue this new funding program.

⁴Telephone Communication, Walter Kieser, Board of Directors, Yosemite Restoration TRUST, December 20, 1997

CHAPTER 12: ORGANIZATIONAL PLAN

The MOU structure that has governed YARTS for the past eight years can be described as a “loose handshake.” Member jurisdictions were bound together only to the extent that they shared common goals. While this structure worked very well during the early years of organizational development, many YARTS stakeholders now feel the need to move forward and formalize the organization. Key reasons for changing the current structure are:

YARTS must evolve as an organization to accommodate the change from a planning task force to an operating agency.

- **Operational and administrative funding:** Potential funding agencies may be hesitant to award large grants to organizations whose only binding arrangement is an MOU. As YARTS moves into its role as an operating agency, increasing amounts of funding will be necessary to provide proper service levels, fund capital project development, etc.
- **Administrative Action:** While the Merced County Association of Governments has done an exemplary job of staffing the fledgling YARTS organization through its growth and development phases, stakeholders expressed an interest in having more control over agency staff. In addition, the MCAG board is currently the grant holder for YARTS funding and is required to take actions to implement decisions of the YARTS board. YARTS stakeholders expressed concern that MCAG might at some future point have a conflict of interest in acting both as YARTS’ lead agency and as Merced County’s local transportation commission.
- **Liability of YARTS member agencies:** Under the MOU, YARTS member agencies are not protected from liability claims. This has not been a major concern so long as the organization was responsible only for studies. As YARTS moves toward implementation of service, and construction of facilities, it will be important to protect member agencies from claims and other legal actions.
- **Changing expertise requirements:** The expertise required for an operating agency is different from that for a planning agency. YARTS may need to evaluate its staffing in terms of the services it provides.

ORGANIZATIONAL MODELS

While there are an almost unlimited number of variations in the way organizations function, there are relatively few organizational models with legal standing. These models can be customized by their organizers to meet the needs of their individual circumstances. Besides the current Memorandum of Understanding or consortium organization, there are two other possible models: the Joint Powers Authority (JPA) and the Special District.

Because the enabling legislation for both JPAs and Special Districts offer a great deal of flexibility, the specifics of how a future YARTS entity would function are largely dependent upon the preferences and requirements of its participating parties.

The advantages and constraints of each model are summarized in Figure 12-1.

FIGURE 12-1
SUMMARY ADVANTAGES AND CONSTRAINTS OF JPA AND
SPECIAL DISTRICT ORGANIZATIONS

	Advantages	Constraints
JPA	<ul style="list-style-type: none">• Simplicity – Easy to form• Flexibility in authority, composition functions and duration• Provides protection from liability• Represents a high level of commitment• Legal entity for receiving grant funds, hiring staff, contracting	<ul style="list-style-type: none">• No authority to introduce tax measures• Boundaries constrained to be contiguous with member jurisdictions• No authority to enact ordinances• Does not require elected officials onboard which may be considered less responsive to constituents.
DISTRICT	<ul style="list-style-type: none">• Provides protection from liability• Represents a high level of commitment• Legal entity for receiving grant funds, hiring staff, contracting• Legal authority to introduce tax measures• Can identify boundaries separate from the boundaries of member agencies.• Highly accountable to constituents.	<ul style="list-style-type: none">• Complex formation includes legislation• More formal and restrictive; more difficult to amend• Legislative support is required for formation

Joint Powers Authorities

The Joint Powers Authority model may be most appropriate for YARTS because it represents the simplest next evolutionary step in formalizing the organization. It can create the infrastructure required for contracting or hiring staff directly, and for receiving grant funds, which does not exist through the current MOU. A special district, described below, could provide YARTS with additional powers but would be an even more formalized body. That might be appropriate later in the development of YARTS, if at all.

California Government Code provides for the joint exercise of powers of two or more public agencies, if authorized by their governing bodies in a Joint Powers agreement. The Joint Powers agreement can create an entity that is separate from the participating parties and is responsible for the administration of the agreement. This separate entity is termed a Joint Powers Authority. The JPA's powers are limited only by the activities which are common to the agreement's participating parties. These often include powers to:

- Employ agents and employees.
- Make and enter contracts.
- Apply for grants, and receive and administer grant funds.
- Own, maintain, operate, lease, contract for and operate services and facilities.
- Acquire, manage, or dispose of any building or property.
- Incur debts, liabilities or obligations, including issuance of bonds.
- Exercise eminent domain.

Unlike special districts, JPAs cannot propose tax measures, or levy taxes directly. JPAs can however, expend tax revenues if appropriated from member entities through voluntary agreement.

The Joint Powers agreement is relatively easy to create and provides the participating parties a tremendous amount of flexibility to meet the needs of any organization. The agreement is created, modified and terminated at the will of the participating parties. Dissolution of the JPA only requires agreement of the signatories. The agreement can designate a termination date at the time of signing or continue in force until rescinded by the parties.

The powers of a JPA are limited only by the powers of those enacting it. JPAs cannot be given the authority to initiate tax measures or to enact ordinances.

Advantages of the JPA Model for YARTS

- JPAs are easy to create because the agreement can be drafted by any mutually-agreed upon agent and no special legislation is required.
- Joint Power agreements are flexible about authority, composition, functions and duration.
- Joint Power agreements can reduce risk of liability by vesting responsibility for actions with the separate JPA entity.
- Joint Power agreements can provide a higher level of commitment to joint efforts since signatories are obliged to follow commitments to the extent provided for in the signed agreement.

Constraints of the JPA Model for YARTS

- While the JPA can apply for and administer grants and can receive tax revenues or other funding from participating jurisdictions, it cannot introduce tax measures for financing its work.
- JPAs have no power to pass ordinances in cities or counties for the accomplishment of its tasks. It is, therefore, less powerful than a special district.
- JPAs can have less public accountability because public officials are not required by law to sit on a JPA's governing board; this disadvantage can be addressed by requiring in the agreement that the JPA's governing board members be public officials.

Special Districts

Special Districts are far more complex organizational models than JPAs. By creating a district that generates revenue for services directly from beneficiaries of those services, special districts offer a highly accountable form of governance.

A special district is a separate, limited purpose, local governmental agency that delivers public services to specific communities. Once formed, special districts are considered autonomous government entities and are accountable only to the voters or constituents they serve. However, special districts must follow State laws pertaining to bonded debt, record keeping, and elections.

Special districts have the same governing powers as other local governments. In addition to the powers available to JPAs, special districts can also issue debt, tax, levy assessments, and charge fees for their services.

Districts that involve multiple Counties and the complexities that would be involved with YARTS are typically formed by special legislation. To repeal the special district's authority, a second act of legislation is required. The entire creation process would require at least a year after organizational details are worked out. It would appear that both State and Federal legislation would be required to form a YARTS District that includes federal participants.

A key advantage of the district form or organization is that the boundary need not be contiguous with the county lines. This allows some parts of a county to be in the YARTS district, while other areas lie outside the district.

Advantages of the Special District Model for YARTS

- Special districts have greater funding flexibility because they can levy taxes and issue tax revenue bonds, although district formation does not eliminate the need to go back to the voters for a 2/3 majority vote on taxation measures.
- Special districts can tailor jurisdictional boundaries to coincide with service recipients, thereby linking costs of services to beneficiaries.
- Special districts can pass local ordinances in support of their projects.

Disadvantages of the Special District Model for YARTS

- Special district formation can take much longer than that of the JPA and typically require a minimum of a year to complete.
- Although the participating parties can determine the special district's powers and functioning, parties must convince a State legislator to support their formation. For YARTS, federal legislation must also be pursued.
- Special districts are less flexible since changes to district membership or powers require legislation.

JPA FORMATION

The YARTS Management Board has agreed to form a committee to develop a Joint Powers Agreement over the next year. The goal is to have this agreement in place by the time service begins in June 1999.

While each element of the JPA agreement will be subject to the discussion of the committee, the Management Board has agreed to move forward on a number of key recommendations. These are:

Develop a draft Joint Powers Authority agreement within the next six months and ratify the agreement within nine months. The JPA agreement creates a legal entity that is distinct from YARTS participating parties. A JPA provides YARTS with important powers and protections not available under the current MOU agreement and is easier and faster to create than a special district. Although special districts could give YARTS increased authority, the political will for this evolutionary step is insufficient at this time.

While funding for YARTS is secured for the 1998-99 fiscal year with MCAG as the lead agency, future funding would come through the YARTS organization. The important decisions regarding "sanctioning" of transit providers for the 1999 summer season would be a joint YARTS/National Park decision. Insurance indemnification would be provided for those contracting organizations. In addition, by establishing itself quickly as a credible and unified organization with the capacity to manage its own funds, YARTS will encourage State and Federal agencies to consider YARTS for future funding.

Consider the creation of a special district in the future. As a special district, YARTS can draw boundaries that more clearly reflect the benefit area of the YARTS service. Given the large and complex geography of California Counties, this may prove desirable in the future, especially if additional counties or parts of counties are added. Even now it is difficult for YARTS to have the "full attention" of its member's county boards and other organizations since the counties extend far beyond the Yosemite region. In addition, long-term financial stability may require raising local revenues, which can only be done through a District.

The extra effort required to develop special legislation on both the Federal and State level to initiate a YARTS district and the extensive negotiations that would be required to define such a district's boundaries argues for delaying a decision about forming a district for at least two years after the JPA is formed. Public input has shown a clear concern about using local taxes for YARTS, and creating a district, even one that does not immediately use its powers to initiate tax measures, would be doomed to failure at this juncture. The matter should be reconsidered at least two years after the JPA is formed, and probably annually thereafter, as the lead time for creating a district would be well over a year.

Appoint an ad-hoc committee to oversee the institutional transition. The task of creating the JPA requires dedicated attention and specialized skills. Recognizing that the Management Board is fully engaged with system planning and funding issues, an ad hoc committee should be created to manage the drafting of an appropriate Joint Powers agreement. The committee would report directly to the YARTS Board at its monthly meetings.

The committee should be assisted by a facilitator (discussed below) and by appropriate counsel. In addition, the attorneys for each of the member jurisdictions would review and comment on the draft document prior to affirmation.

Appoint a facilitator to oversee the JPA formation committee. Designating a single individual to lead this effort provides the dedicated attention and accountability needed for this process to progress efficiently. The individual should be perceived by YARTS member agencies as a neutral party with expertise in forming transportation organizations. The facilitator would report directly through the committee to the Board. The use of such a facilitator was seen as getting the Altamont Commuter Rail service off the ground at a time when an initial JPA agreement was stalled.

The draft agreement will be reviewed by the legal council of each jurisdiction signing the agreement and will require a vote of each jurisdiction participating in the JPA. Failure of one jurisdiction to join the JPA would not necessarily result in the dissolution of the YARTS organization. Amendments to the agreement may be possible, or the YARTS JPA may move forward without including all original participants.

JPA formation will require approximately six months. With a basic agreement in place, it will be possible to develop a plan of action regarding other key organizational decisions. These include:

YARTS will have only the authority prescribed in the JPA agreement, and may not take the place of any local government or the National Park Service.

Functional Responsibilities

YARTS' responsibilities must be clearly delineated in the JPA agreement. It is essential that the "authority" given to this new entity not be seen as conflicting with the authority belonging rightly to local government or to the National Park Service. The interactions between YARTS and these member jurisdictions should also be clearly explained in the JPA agreement.

The following suggestions are designed to guide the development of the functional responsibilities of a future YARTS JPA.

Limit YARTS focus to regional transportation. The stakeholders interviewed for this paper were clearly in favor of a limited YARTS role, including regional transit only¹. This needs to be specified in the JPA agreement. A narrow focus will help YARTS to prioritize activities and allocate resources effectively. It will also better communicate its goals to outside interests. The agreement should be written to allow flexibility for future joint ventures however, including adding local transit connections, regional marketing, etc. at the discretion of the Board. Combining YATI and YARTS responsibilities may make sense, even in the short

¹YARTS' regional transit role includes local travel between communities in the four YARTS corridors, not simply access to the Park.

term. The relationship between YATI and YARTS is very important and there are advantages to combining these functions.

Add implementation to YARTS policy-making role. YARTS will continue to be a planning organization for the foreseeable future. Decisions about increasing or decreasing service levels, deciding the future of rail, etc. will continue to be critical to YARTS. Beginning with the summer of 1999, YARTS will also be an operating agency. While the service design prescribes that private operators will actually provide the service on the road, YARTS will have increasing responsibilities for oversight including potentially identifying minimum service levels on each corridor, sanctioning operators, marketing services, etc. Ultimately, YARTS may be responsible for contracting directly for services, purchasing equipment, acquiring property, setting fares, etc.

Increase communication with Federal, State and local agencies, including direct briefings with the policy boards of member jurisdictions. Regular communications – either through in-person meetings, telephone calls, press releases or printed material – will greatly increase awareness of YARTS activities by important partners. This is especially important in this transitional phase as YARTS establishes itself as distinct from its members. Any concerns from key constituents should be identified early in the process and incorporated in future plans. Heightened communication can facilitate crucial support from authorizing and funding agencies.

GOVERNING STRUCTURE

Within the framework of a JPA, a variety of governing structures are possible. The following recommendations are starting points for the formation committee's discussions. Whatever the decision, the voting structure of the organization, and the flexibility to add or delete members is an essential part of the JPA agreement.

The new JPA would be a legal entity and would be subject to all of the requirements of the Brown Act. In addition, it is good practice to include items specifically, such as conflict of interest standards, in the JPA agreement.

Initially maintain existing Board composition with provisions for additions in the future. The current member agencies have supported the YARTS process since the beginning and have the institutional knowledge to facilitate a smooth transition to the JPA. The current size enables a high level of discussion needed to create a consensus; additional members could interfere with decision making efficiency. It

A Joint Powers Authority agreement is more binding than an MOU. Members may be added and deleted only by a specified process.

is recommended that the current composition of the Board be maintained, including both voting and *ex officio* members.

Adding to the current policy board membership could present opportunities in the future. Fresno and Stanislaus Counties have requested representation, and should be considered in the future. An *ex officio* representation from Fresno may be appropriate as the JPA is formed, to provide a connection with the closest major airport. The Technical and Citizens Advisory Committee unanimously endorsed the idea of giving Fresno County non-voting representation on the YARTS board.

Besides expertise and enhanced cooperation, the inclusion of one more voting member could be useful since the Board's even number equates a majority vote with a 2/3 "super" majority. To accommodate this contingency, the Joint Powers agreement should lay out a process to allow new parties to participate in the future.

Regardless of the number of members, it is recommended that the "one member, one vote" rule be maintained. This allows counties with unequal populations to be equally represented on the YARTS Board. It also improves the equity of decisions that may result in some corridors having more service than others, since each county would have an equal opportunity to affect the decision.

Allow for broader representation on the advisory committees. YARTS has already taken the step of broadening membership in the Technical and Citizens Advisory Committee, to include several jurisdictions that are not represented at the policy level. While it is important that advisory committees not become unwieldy, it may be possible to improve cooperation and communication with interested stakeholders by including them on an advisory level, prior to considering them for full membership in the JPA.

Require a quorum to be four voting members. The quorum should be a majority of the voting Board members or their alternates; under the current composition, this would be four representatives. Not requiring *ex officio* presence for a legal quorum doesn't diminish their importance, but allows for business to be conducted over the broadest possible set of conditions.

Require decisions to be made by a majority vote of full voting membership. To ensure the commitment of the participating agencies to Board decisions, a majority of the full membership by the Board member or his/her alternate should be required for Board decisions and not just a majority of the quorum. Under current composition, this requires four affirming votes to pass a motion. Because this is already essentially a "super-majority" of the six voting members of the YARTS board, no votes would require a more substantial majority. As future members are added, it may be wise to revisit this issue, to determine whether some issues, such as adding or dropping members, should require a more substantial majority.

Establish a policy addressing potential conflicts of interest. The integrity of YARTS decisions must be above reproach. To avoid Board and Committee members being charged with having a conflict of interest, YARTS could develop a policy that requires, for example, all voting decision makers to abstain if they stand to gain from personally or be harmed by the proposed action. Such individuals could still participate in discussion but would advise the other members of their potential bias. The Board would need to define the level of benefit or harm in order to avoid confusion. The policy should identify who the arbiter of potential conflicts will be. An agency attorney can provide immediate advice on such matters.

Advisory Committees

Determine the composition of the TCAC, possibly dividing it into two standing committees, one consisting of technical staff and one consisting of citizen stakeholders. The current Technical and Citizens Advisory Committee meetings typically attract more than 50 people, including more than 20 committee members. It is increasingly difficult to create order in those meetings, and to go through the large agendas required of the committee. Creating two separate committees, each with equal standing, would allow committee members to tailor their advice according to their areas of expertise. It would also allow for a reasonable time to discuss agenda items, formulate opinions and take action necessary to advise the Management Board.

The Technical Advisory Committee could be composed of key staff members of the jurisdictions represented on the Board. Others would be added, including staff representation from Fresno and Stanislaus County and members from Caltrans, FHA, U.S. Forest Service and others as appropriate. Two members would be appointed from the jurisdictions represented on the Board; one each would be appointed by the Board as a whole representing the other constituencies. Representatives would be chosen because of their expertise in transportation systems and/or planning.

The revised Citizen Advisory Committee could be composed of two residents of each member county, as appointed by the county's Board member. While all committee meetings, as well as the Board meetings, would be open to the public and would meet Brown Act requirements, a Citizens Advisory Committee would provide a grass roots "early warning" system for public comment. This would enable the Board to receive input from the public before taking up an agenda item.

Both the TAC and the CAC would be subject to conflict of interest requirements, although it is likely that interested members would be drawn from individuals who may have a stake in the future of YARTS. Voting on items that could directly profit committee members would be strictly prohibited. All Committee members and Board members would be requested to file financial disclosure statements prior to joining the committee, to serve as an arbiter when a conflict is challenged.

It should be noted that the current combined TCAC Committee expressed a strong preference for remaining a single entity and for a more direct connection to the Management Board.

Ensure the independence of the committee. Once appointed committee members should serve for a specified term, subject to attendance requirements. Committee members should be free to form their own opinions providing non-binding advice and counsel and should not be required to act as a block or to follow any prescribed point of view. Voting records of all committee and Board actions would be public record.

Designate a chairperson and reporter in each committee. Each committee would elect a chairperson to serve a one year term. The chair would work with staff to develop the committee's monthly agenda, based on the upcoming Board meeting agenda, and be responsible for facilitating the committee meeting and for reporting to the Board. Additionally, each committee will designate one reporter who is responsible for drafting the meeting minutes.

Establish a direct reporting mechanism between the Board and its Committees. Each committee's chair would be responsible for reporting on its activities at the monthly Board meetings. These reports would come in two forms. First, as a regular item on the agenda, the chair would be provided time for a report. In addition, comments on specific items would be directly communicated from the chair to the Board during discussion on a specific item. Any action taken on an item at the committee level would be reported to the Management Board, including the number voting on each side.

This would improve communication between the Board and its committees by providing a direct link between the groups. The need for a more direct link has been an increasing concern of the TCAC.

While this places a burden on the committee chairs, it is essential for creating a sense of unity between the Board and the Committees.

The chairperson of each committee should report directly to Management Board, avoiding the indirect communication through staff.

Provide for the creation of standing or temporary committees. As the responsibilities of the Board increase, additional projects might best be managed by additional committees. Temporary or ad hoc committees could give Board members the additional support needed to manage discreet tasks, such as vender selection, new project development or bus design. The Board might also consider creating new standing committees focused on specialized but ongoing activities, such as marketing, funding or facility maintenance. The Joint Powers agreement should give the JPA the ability to create committees as needed.

As with all Board and committee activities, it is recommended that full compliance with the Brown Act be achieved, including public notice and opportunities for public involvement.

Manage the dialog between the public and the Board at meetings. YARTS is to be commended for the openness of its meetings, and this openness is expected to continue with the new organization. However, as meeting agendas have grown, it has become increasingly important to separate public comment on each item from Board discussion. Typically, when an item is presented, the conversation can be guided through the following sequence (assuming an action item) subject to Robert's Rules of Order, and the requirements of the Brown Act:

1. The Chair asks the Board if they have questions for staff or presenter.
2. After all questions have been answered, there is opportunity for public comment. Comments may be time limited, at the discretion of the chair.
3. At the end of public comments, the chair may ask the presenter to respond to one or more public concern.
4. The discussion is brought back to the Board and a motion (if any) is entertained.
5. Following a seconding of the motion, Board discussion occurs, and finally a vote is taken.

The Chair may, at his/her discretion, require the public to fill out comment cards, requiring that they identify the item on the agenda on which they intend to speak. Cards may be turned in until the time that the item is to be heard, to a designated staff person.

A key element is that the public has the opportunity to comment on each item before the Board takes action on that item. In addition, the public should have the opportunity to comment on any item not on the agenda at a separate time.

These recommendations introduce more formality than has typically been employed at YARTS meetings. YARTS may decide not to implement these recommendations immediately, however, they do meet the legal requirements for public participation and may serve to shorten the very long agendas facing YARTS.

ADMINISTRATIVE STAFFING

Continue to contract with MCAG to provide transitional staffing. MCAG's continued support will be crucial over the next 12 months to ensure continuity of service and institutional knowledge. As the grant holder for the Phase III consultant, MCAG staff will play a critical role in staffing YARTS for at least that period. MCAG can also provide institutional development experience based on its work creating YATI, Inc.

Within the next year, the YARTS Board may choose to develop a policy that would provide for a longer term transition away from the MCAG staff. This is expected to be a gradual transition, requiring more than a single year, to ensure institutional consistency and to ensure

that the most cost effective structure is employed. It may never be desirable to sever staffing ties to MCAG completely, particularly as that organization is the staff to YATI.

Develop an organizational structure within next 12 months. The newly formed JPA will want to take a more active role in staffing decisions. Currently, staffing is provided by MCAG, and no employees are assigned full time to YARTS. While this has provided a very economical staffing for YARTS, the increasing demands of the YARTS organization may make this arrangement less practical in the future. Ultimately, YARTS may want to begin hiring its own staff, or at a minimum may want to have a more direct role in selecting staff that will be largely dedicated to YARTS. There are several ways to do this. One example, used by the Altamont Commuter Express is to contract through a local agency, such as MCAG. The difference from the current model is that employees who work primarily for YARTS would be selected by a panel of YARTS Board and committee members but would continue to enjoy the infrastructure of the lead agency (payroll, etc.). In this model, YARTS can take advantage of the "employment infrastructure" of another organization, including accounting and payroll services, and benefit plans, without having to create something from scratch.

Alternatively, YARTS could contract with a private provider for administrative services, as was done with Foothill Transit. This could be through a management firm, as Foothill Transit does, or some other type of arrangement. For example, Lake County Transit contracts with an individual to be a part time Transit Manager for their regional fixed route and demand responsive services. Finally, YARTS, as a JPA, could hire staff directly.

As an initial step, the ad hoc organization committee should work with the existing staff to identify a YARTS staffing budget for the next 12 months and should use that budget to determine an organization plan. Given a budget and a structure, the Board can then decide how to obtain appropriate staff. The duration of available funding is a key consideration, since it may not be possible to hire staff when funding is only guaranteed for a short period.

Identify appropriate staff members based on new skill set. Staff skills will need to reflect the new demands resulting from YARTS implementation phase. These skills will need to include technical expertise in transit operations, finance and performance measurement, as well as planning. The Executive Director will continue to be especially key to YARTS continued success. This position will require someone who is politically savvy, an excellent fund raiser, a proven manager, respected by YARTS Board, and knowledgeable about transit. This could continue to be the MCAG Executive Director, a member of another existing staff, or a dedicated individual hired in any of the ways described above.

Allow YARTS activity level to dictate the size of staff. Staff size will depend on many factors, including funding, functions, and scope of work. It may be that YARTS will only need one dedicated full time equivalent (FTE), such as an executive director, with additional temporary staff added as needed. As needs develop, the executive director could be allowed to contract for specialized services or hire additional staff directly. Using a lead

agency is an ideal way to add support services, such as administration, accounting and legal assistance.

Legal assistance should be provided routinely and should be included at all YARTS JPA meetings. Additional legal expertise will be needed as YARTS drafts a JPA agreement. In addition, several legal questions regarding conflicts, Brown Act, etc. have come up at Board meetings. It is impossible to put those concerns to rest quickly without the presence of a legal council. Typically, the agency attorney attends all Board meetings and provides "on the spot" advice to the Board, including advice on the rules of order and Brown Act requirements. While this is a relatively expensive recommendation, it is a prudent one.

Legal counsel should be identified and should attend all YARTS Board meetings for instant advice on Brown Act and other issues.

FUNDING COMPOSITION

Most JPA agreements identify sources of funding, the contribution expected from each entity and the formula on which funding will be contributed. Funding formulas can be based on population, amount of service received, or any of a variety of formulas. Since the YARTS members have contributed only in-kind services directly to YARTS, there has been no need to develop distribution formulas. This may ultimately change, and should be considered from the beginning.

Consider contributions from the private sector. Since the private sector stands to benefit with the implementation of a successful YARTS system or be harmed by the disintegration of its efforts, it is appropriate to consider mechanisms for contributions from the private sector. For example, in Yolo County, YCTD collected a traffic mitigation fee from a large business that anticipated attracting a large volume of customers, many in private cars. The fees went to expanding the transit system. In-kind contributions, such as rolling stock or parking space could also be considered. While the specifics of private contributions may not be known at this time, allowing a mechanism to encourage and ultimately require such contributions should be considered at the formation of the JPA.

Develop a formula for financial or in-kind contributions from each participating party. It is highly unlikely that YARTS services can be fully funded without at least ongoing in-kind contributions made by the participating parties. One option that is generally well received when services are not evenly distributed to all parties, is to divide costs, including in-kind requirements based on the level of benefit received. Benefits can be defined as number of passengers, number of vehicle miles, amount of fare box revenue or number of vehicle hours.

Provide a mechanism that allows individual jurisdictions to increase service by increasing funding. For example, one county may choose to increase service frequencies beyond the level that would be required to meet demand, in order to provide a more convenient service. Another example might be extending YARTS service beyond the shortest possible route to encourage tourism in other parts of the County. A mechanism must be developed to allow for "buying up" services that could not be provided without additional funding. This needs to be debated early in the formation of the JPA because it is likely to increase competition among the corridors.

Identify revenue-generating sources in the region. Currently, little ongoing public subsidy is planned for YARTS. However, an ongoing revenue source may be required to ensure service quality or an appropriate quantity of service in each area. To prepare for this possibility, it is recommended that the new JPA take as a very early task, responsibility for a study of potential sustained revenue sources for YARTS. These sources, rather than one time grants, will be essential to providing a long term stable YARTS service and organization. Identifying stable sources early will be seen positively by other funders with one-time grants, since organizational capacity is critical to grant management. Like Tahoe's CTS, YARTS could hire a contractor to identify potential funding sources.

JPA IMPLEMENTATION TIMETABLE

The next twelve-month period will be extremely important to YARTS organizational evolution. In order to facilitate its goal of beginning operations next summer, YARTS leadership can begin immediately to take steps toward formalizing its institutional commitment to this next implementation phase. The following time line lays out YARTS upcoming milestones for the next four quarters. Detailed roles and responsibilities are presented in the Action Plan section of this report.

QUARTER I

GOAL 1: TO ESTABLISH A CONSENSUS AS TO YARTS' NEXT INCREMENTAL STEP IN ITS ORGANIZATIONAL EVOLUTION.

Objective 1a: TCAC endorses organizational model. **COMPLETE**

Objective 1b: YARTS Board members select appropriate institutional model. **COMPLETE**

Objective 1c: YARTS Board members gain support of governing bodies for YARTS reorganization.

GOAL 2: TO BEGIN THE FORMATION PROCESS.

- Objective 2:** YARTS Board members select a facilitator to lead formation process.
- Objective 2b:** Each YARTS Board member appoints at least one representative with appropriate technical skills to serve on an Ad-Hoc Formation Committee.

QUARTER II

GOAL 3: TO FRAME THE RELEVANT ATTRIBUTES OF THE DESIRED ORGANIZATIONAL STRUCTURE.

- Objective 3a:** YARTS Board defines the powers and protections of the new governing entity.
- Objective 3b:** YARTS Board develops a funding formula for participating party contributions.
- Objective 3c:** YARTS Board identifies transitional process for administrative staff support.
- Objective 3d:** YARTS Board agrees upon functional responsibilities and breadth of mandate.

GOAL 4: TO CREATE THE ORGANIZING AGREEMENT.

- Objective 4a:** The Ad Hoc Formation Committee drafts an organizational agreement, in consultation with YARTS Board and legal counsel.
- Objective 4b:** TCAC members review and comment on draft agreement.
- Objective 4c:** YARTS Board members review draft for comment and approval.

QUARTER III

GOAL 5: TO GAIN SUPPORT FROM YARTS GOVERNING BODIES.

Objective 5a: Each participating party's legal counsel reviews and authorizes agreement.

Objective 5b: YARTS Board members present agreement to individual governing bodies.

Objective 5c: Participating parties' governing bodies consider and vote on agreement.

GOAL 6: TO FORMALIZE AGREEMENT AS LEGALLY BINDING DOCUMENT.

Objective 6a: Secure confirmation and signature of authorizing bodies.

Objective 6b: File notice of agreement with appropriate agencies.

QUARTER IV

GOAL 7: PROVIDE SUPPORTING STRUCTURE FOR TRANSITION TO NEW GOVERNING ENTITY.

Objective 7a: YARTS Board selects Administrative Agency structure, either under contract with a public or private entity, or through direct hire.

Objective 7b: YARTS Board hires or contracts with an Executive Director.

GOAL 8: BEGIN IMPLEMENTATION OF A DEMONSTRATION PROJECT UNDER GUIDANCE OF NEW GOVERNING ENTITY.

YARTS Technical and Citizens Advisory Committee *(continued)*

Name	Company/Organization
Nanci Sikes	Tuolumne County Visitors Bureau
Erik Steavens	Federal Highway Administration
PatriciaTaylor-Maley	Madera Co. Trans Commission
Clark Thompson	Council of Fresno County Governments
Russ Thornton	Yosemite Concession Services Corp.
Samuel Walker	Mono County Citizen
Jay Watson	The Wilderness Society
Diana Westmoreland Pedrozo	Merced County Chamber of Commerce
Richard Wiebe	Sierra Club

Staff

Jesse Brown	MCAG Executive Director
Marjie Kirn	MCAG Staff
Jamie Massey	MCAG Public Information Officer
Amy Spann	MCAG Staff

Consultants

Nelson\Nygaard Consulting Associates
DKS Associates
Dornbusch & Company
Donaldson and Associates

APPENDIX A
Evaluation of Alternatives

FIGURE A-1
NO PROJECT ALTERNATIVE SUMMARY TABLE
SERVICE EFFECTIVENESS

	Ridership	Day vehicles removed	Visitation increase	Visitor spending	Market capture
Number	50,000	4,000	(300,000)	(-7.1) million annually	1%
Score	1	4	1	1	1
Analysis	New operators would undoubtedly begin service, however service would not be consistent with YARTS' desire for equity	Effective at removing vehicles, but does not provide an alternate access mode.	Results in declining visitation.	Net loss in spending and economic hardship in region.	Could increase as ridership increases, but is currently very small.

Notes: (1) Ridership would change as new private services develop.

(2) As ridership increases, other indicators would change as well, and negative impacts would be mitigated.

FIGURE A-2
NO PROJECT ALTERNATIVE SUMMARY TABLE
SERVICE EFFICIENCY

	Cost per rider	Boardings per service hour	Subsidy required	Cost per vehicle removed	Intermodal connections and coverage	Multiple goals
Number	\$16.00	2	\$0	\$0	No additional connections; minimal coverage	None
Score	2	1	5	5	1	1
Analysis	Cost profile would change depending on services offered. Cost shown is based on current VIA costs.	This factor would change depending on the amount of service offered. Demand would increase with increasing access restrictions.	Individual jurisdictions may choose to subsidize services to ensure access.	Vehicles removed by restricting access.	Private operators may elect to improve service levels.	Services would develop based on market interest only. Would not meet YARTS goals.

Note: (1) Efficiency indicators are based on existing VIA services. Indicators would change based on new services developed by private vendors in response to access restrictions.

FIGURE A-3
NO PROJECT ALTERNATIVE SUMMARY TABLE
QUALITY OF SERVICE

	Visitor experience	Risk	Frequency	Reliability
Score	3	1	1	2
Analysis	Those who are able to get into the Valley will enjoy an improved experience as overcrowding is reduced. Others will miss the experience altogether. Reduced services in gateways due to negative economic impacts.	Major risks for reductions in visitation and severe economic impacts. No direct financial risk on service.	Frequency provided only to the extent implemented by private vendors or subsidized by individual jurisdictions.	Access restrictions would require new management systems to avoid confusion and gate closures.

FIGURE A-4
NO PROJECT ALTERNATIVE SUMMARY TABLE
ENVIRONMENTAL PRESERVATION

	Restoration	Air Quality
Number	Restoration would be based on VIP plan, assuming other land use changes are effected.	Unquantified benefits in all pollutant categories may be minimized by increases in the shuttle fleet. Improvements assume alternative fueled shuttles and limited additional diesel bus impact.
Score	4	4
Analysis	Allows for restoration through restrictions in access.	Benefits accrue through restricted access.

FIGURE A-5
ALTERNATIVE 1 TRAFFIC MANAGEMENT PLAN
SUMMARY TABLE - SERVICE EFFECTIVENESS

	Ridership	Day vehicles removed	Visitation increase	Visitor spending	Market capture
Number	486,900	1,866	+ 700,000	+\$10.6M annually	11%
Score	3	3	4	3	2
Analysis	Begins high, but stays relatively flat over time.	Begins high, but stays relatively flat over time.	Assumes visitors are not deterred by possibility of being required to ride transit during overflow periods.	Increases in spending associated with growth in visitation.	Skims small percentage of visitors who could not otherwise enter Park on peak days.

Notes: (1) Visitation increase is anticipated increase in 2005 over 1996 visitation levels.

FIGURE A-6
ALTERNATIVE 1 TRAFFIC MANAGEMENT PLAN
SUMMARY TABLE - SERVICE EFFICIENCY

	Cost per rider	Boardings per service hour	Subsidy required	Cost per vehicle removed	Intermodal connections and coverage	Multiple goals
Number	\$13.43	16	\$0 - \$2,601,800	\$38.95	No additional connections; minimal coverage	None
Score	5	5	3	3	1	2
Analysis	This alternative strives to minimize cost per rider. Capital expenses and standby expenses raise this figure near to other alternatives.	Concentrating service only where it is most needed, this alternative performs significantly better than the others.	Financial risk here is less than Alternative 3, but the Phased Alternative offers the least risk of all.	Less costly than more robust phases of Alternative 2, but more costly than the smaller Phase 1.	Additional private operators could improve these services.	Gets people into the Valley on crowded days. Serves no other goals.

FIGURE A-7
ALTERNATIVE 1 TRAFFIC MANAGEMENT PLAN
SUMMARY TABLE - ENVIRONMENTAL PRESERVATION

	Restoration	Air Quality
Number	Allows restoration to the extent that auto access is restricted. Could allow as much as stated in the VIP	Improvements in the range of Alternative 2 Phase 3. Would require CNG vehicles to avoid increases in NOx.
Score	5	4
Analysis	Maximizes preservation and retains potential access.	Improves air quality, especially in Valley on most severely impacted days.

FIGURE A-8
ALTERNATIVE 1 TRAFFIC MANAGEMENT PLAN
SUMMARY TABLE - QUALITY OF SERVICE

	Visitor experience	Risk	Frequency	Reliability
Score	4	3	4	3
Analysis	Operationally this is by far the most complex alternative. Visitor experience may be very good, but this alternative offers the most opportunities for something to go wrong	Low investment risk, but very high risk of reliability failure due to information breakdowns. Frequent failures will depress visitation.	Highly variable, depending entirely on visitor demand.	Without excellent customer service, may have the appearance of being unreliable. Since this alternative does not keep schedules, it requires real-time information as to where buses are and when they will arrive.

FIGURE A-9
ALTERNATIVE 2 PHASED TRANSIT ALTERNATIVE
SUMMARY TABLE - SERVICE EFFECTIVENESS

	Ridership	Day vehicles removed	Visitation increase	Visitor spending	Market capture
Number:					
Ph. 0	61,050	256	+ 700,000	+ \$16.8M annually	6%
Ph. 1	97,300	1,001			6%
Ph. 2	838,700	3,000			76%
Ph. 3	1,421,500	5,700			75%
Score	4	4	4	5	4
Analysis	Ridership starts very low, but grows dramatically, surpassing Alt. 1 by Phase 2. Lower than Alt. 3	As with ridership, starts low and grows.	Phased implementation allows visitors to adapt to new access options, and allows service to adjust to demand.	As visitation is allowed to grow, visitor spending will also grow. Provides opportunities for businesses to co-locate with intercept sites.	At in Phases 1 & 2, YARTS attempts only to attract employees and people most likely to take transit. By Phase 2, motor vehicle restrictions encourage most day visitors to use YARTS.

FIGURE A-10
ALTERNATIVE 2 PHASED TRANSIT SERVICE
SUMMARY TABLE - SERVICE EFFICIENCY

	Cost per rider	Boardings per service hour	Subsidy required	Cost per vehicle removed	Intermodal connections and coverage	Multiple goals
Number						
Ph. 0	\$2 - \$44	3.9 - 8.3	Btwn. \$0 and \$350,000	\$38	Limited at first, but increasing throughout region.	Provides regional transit systems for local residents and employees
Ph. 1	\$13 - \$37	3.7 - 6.9	\$800,000	\$15		
Ph. 2	\$14	13.5	\$438,000	\$41		
Ph. 3	\$16	11.4	\$120,000	\$44		
Score	4	4	4	3	3	3
Analysis	Cost per rider is highly variable in the first phases to market uncertainties. By Phase 2, it drops to a number between Alts. 1 and 3.	Boardings start low then leap with the access changes in Phase 2. Past Phase 2, the system slowly grows less efficient as it is forced to expand its range.	This alternative strives to minimize the subsidy in the earlier phases by starting very small. By the time access controls are implemented, subsidy drops because demand has been proven.	Cost per vehicle removed in Phase 1 is lowest among all alternatives. At Phase 2 it grows as service range increases.	By Phase 3, YARTS extends to cover most communities in the corridors, including major air and rail connections.	Alternatives 2 and 3 serve more than just Park visitors, allowing added mobility for area residents. It also offers redevelopment and economic opportunities

FIGURE A-11
ALTERNATIVE 2 PHASED TRANSIT SERVICE
SUMMARY TABLE - ENVIRONMENTAL PRESERVATION

	Restoration	Air Quality
Number	Phase 0: No restoration Phase 1: No restoration Phase 2: 4.7 acres Phase 3: 9.4 acres	See figure 4-19
Score	4	3
Analysis	No restoration possible until Phase 2, then up to 9.4 acres with Phase 3. Additional restoration through elimination of employee parking possible.	Dependant upon Phase 3 implementation and alternative fuel buses. Large diesel fleets will not decrease all pollutants.

FIGURE A-12
ALTERNATIVE 2 PHASED TRANSIT SERVICE
SUMMARY TABLE - QUALITY OF SERVICE

	Visitor experience	Risk	Frequency	Reliability
Score	5	5	3	4
Analysis	The greatest advantage of the Phased Alternative is that it builds over time, creating the least amount of risk in quality of service. The voluntary nature of Phases 0 and 1 require a very high level of visitor comfort and quality.	Limits risk by implementing service in phases driven by demand. Does not remove auto infrastructure in park until transit demand is proven.	Frequency is good to the closest-in staging areas in Phase 1, given the need to serve employees. By Phase 3, there is frequent service to most points in all corridors.	Unlike Alternative 1, operates with schedules. With average, proper management, should be reliable.

FIGURE A-13
ALTERNATIVE 3 MAXIMUM TRANSIT ACCESS
SUMMARY TABLE - SERVICE EFFECTIVENESS

	Ridership	Day vehicles removed	Visitation increase	Visitor spending	Market capture
Number	3,435,000 ('00) 4,608,000 ('10)	4,353	+ 700,000	+ \$13.6M annually	80%
Score	5	5	3	4	5
Analysis	Ridership in this alternative is far higher than in any other, since it assumes implementation of the VIP and a robust transit system.	Again, this figure is highest of all of the alternatives because it is a mandatory system.	Allows for high visitation increases, but may introduce more variability, as mandatory transit use could actually decrease visitation short term. Potential benefit offset by variability. This is the only alternative which impacts all seasons.	Impact would be highly dependant on public acceptance of transit as access mode. Potential benefit offset by variability.	High capture due to mandatory nature of service.

FIGURE A-14
ALTERNATIVE 3 - MAXIMUM TRANSIT ACCESS
SUMMARY TABLE - SERVICE EFFICIENCY

	Cost per rider	Boardings per service hour	Subsidy required	Cost per vehicle removed	Intermodal connections and coverage	Multiple goals
Number	\$16	8.5	\$0 - \$24,433,400	\$46.40	Frequent connections throughout five counties and to all intermodal centers.	Meets needs of residents and employees as well as visitors.
Score	3	3	2	2	5	5
Analysis	More than Alt. 1, but in range of Alt. 2. Generally, a very efficient service, but its extensiveness increases costs.	Again because of the great extent of this service and its long passenger trip, it tends to board fewer passengers over time than the others.	Although this service could potentially pay for itself, it poses by far the highest cost risk of any alternative – 10 times Alt. 1.	This is the most costly alternative, but it costs only about 10% more per vehicle removed than the other alternatives.	This alternative ranks by far the best in this criteria.	This alternative ranks by far the best in this criteria.

FIGURE A-15
ALTERNATIVE 3 MAXIMUM TRANSIT ACCESS
SUMMARY TABLE - ENVIRONMENTAL PRESERVATION

	Restoration	Air Quality
Number	Allows for full restoration described in VIP	Most dramatic reduction in all pollutants, assuming CNG buses. NOx would increase under diesel fueled option.
Score	3	4
Analysis	Restoration within the park would be mitigated by the land requirement for over 10,000 parking spaces region-wide.	Requires large alternative fuel fleet to meet maximum benefit. Requires substantial new infrastructure. Question whether large alternative fuel fleet can be put into operation quickly.

FIGURE A-16
ALTERNATIVE 3 MAXIMUM TRANSIT ACCESS
SUMMARY TABLE - QUALITY OF SERVICE

	Visitor experience	Risk	Frequency	Reliability
Score	2	1	5	3
Analysis	Visitor experience could ultimately be acceptable, depending on quality of mandatory system. Those that would rather not deal with bus system may be discouraged from coming at all. Mandatory nature of the system eliminates choice and requires visitors to change their behavior.	High risk of short term visitation drop. High risk investing in parking infrastructure before system is fully proven.	This alternative offers the best frequency to the most places, including year-round service.	Proper management required to ensure reliability of large fleet operation. Large number of buses on the road at peak times could result in "bunching" and delays.

APPENDIX B

Glossary of Acronyms

GLOSSARY OF ACRONYMS

Caltrans	California Department of Transportation
CMAQ	Congestion Mitigation/Air Quality
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GMP	General Management Plan
IIP	Interregional Improvement Program Funds
ISTEA	Intermodal Surface Transportation Efficiency Act
JPA	Joint Powers Authority
LTC	Local Transportation Commission
MCAG	Merced County Association of Governments
MIS	Major Investment Study
MOU	Memorandum of Understanding
NPS	National Park Service
O & M	Operating and Maintenance (Costs)
ORTB	Over-the-Road Bus
RIP	Regional Improvement Program Funds
STA	State Transit Assistance Funds
TDA	Transportation Development Act Funds
TDM	Transportation Demand Management
TOT	Transient Occupancy Tax
VIP	Valley Implementation Plan
YATI	Yosemite Area Traveler Information
YARTS	Yosemite Area Transportation Strategy
YNP	Yosemite National Park

RETURN TO: _____

LOAN PERIOD	1	2	3
Home Use			
	4	5	6

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS.

DUE AS STAMPED BELOW.

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BLACK/NOIR/NEGRO

